Eastern Scotian Shelf Integrated Management (ESSIM) Initiative

Eastern Scotian Shelf Integrated Ocean Management Plan (2006-2011)

Draft for Discussion

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LIST OF ABBREVIATIONS

AOI	Area of Interest
CMA	Coastal Management Area
CNSOPB	Canada-Nova Scotia Offshore Petroleum Board
CWS	Canadian Wildlife Service
DFO	Fisheries and Oceans Canada
DND	Department of National Defence
EBSA	Ecologically and Biologically Significant Area
EC	Environment Canada
EEZ	Exclusive Economic Zone
ESSIM	Eastern Scotian Shelf Integrated Management
GIS	Geographic Information System
IC	Industry Canada
IM	Integrated Management
LOMA	Large Ocean Management Area
MPA	Marine Protected Area
NAFO	Northwest Atlantic Fisheries Organisation
NRCan	Natural Resources Canada
NS Energy	Nova Scotia Department of Energy
OCMD	Ocean and Coastal Management Division (of DFO)
RCOM	Regional Committee on Ocean Management
SRT	Stakeholder Roundtable
TC	Transport Canada

FOREWORD

The Eastern Scotian Shelf Integrated Management (ESSIM) Initiative is a collaborative ocean planning process being led and facilitated by Fisheries and Oceans Canada (DFO), Maritimes Region, under Canada's *Oceans Act*. The primary aim of the Initiative is to develop and implement an Integrated Ocean Management Plan for this large marine region.

The ESSIM Planning Office, housed in DFO's Oceans and Coastal Management Division, has prepared this draft Integrated Ocean Management Plan based on multi-stakeholder information and input gathered to date. This is a working document that is designed to assist the reviewer in providing input to the content of the draft Plan. The reviewer may wish to respond directly to the specific questions and options contained in the document, or provide additional comments on any aspect of the draft Plan.

The draft Plan is being provided to all stakeholders for discussion during the 3rd ESSIM Forum Workshop on February 22nd and 23rd 2005. The draft Plan will continue to be reviewed and discussed during the Spring and Summer 2005 period. Interested and affected organizations, groups and individuals will be able to provide written submissions during this review period. Written comments can be provided by letter, fax or email, or through the ESSIM online discussion forum. The ESSIM Planning Office will also be available to meet directly with organizations, groups and individuals to discuss and receive feedback on the draft Plan.

In addition to the review options listed above, the ESSIM Planning Office is promoting the establishment of a Stakeholder Roundtable during 2005. The primary function of the Stakeholder Roundtable will be to work directly with the ESSIM Planning Office in reviewing, revising, and preparing the final Plan. More detail on the Stakeholder Roundtable and its expected roles and responsibilities is provided in this document.

Once consensus on the Plan has been reached, it will be put forward for final stakeholder acceptance and endorsement by relevant decision-making authorities, leading to designation under the *Oceans Act* in Winter 2006.

For more information on the ESSIM Initiative or the draft Plan, please contact:

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HIGHLIGHTS OF THE PLAN

Highlights of the Eastern Scotian Shelf Integrated Management Plan are provided below.

DEFINITION

The Eastern Scotian Shelf Integrated Ocean Management Plan is a multi-year, strategic-level plan to provide long-term direction and commitment for integrated, ecosystem-based and adaptive management of all marine activities in or affecting the planning area.

The Plan is being developed through a collaborative and inclusive planning process (the ESSIM Initiative) involving all interested and affected government departments, sector groups and individuals. The intent of this process is to develop a Plan that is accepted by stakeholders, endorsed by legislative and regulatory authorities, and designated under the *Oceans Act* by the Minister of Fisheries and Oceans.

OBJECTIVES-BASED MANAGEMENT

The Plan provides an objectives-based approach to ocean management for the Eastern Scotian Shelf. It contains a set of long-term, overarching ecosystem and human use objectives to support agreed upon outcomes for environmental, economic, social and institutional sustainability in the planning area. These high-level objectives are supported by operational objectives for specific ecosystem and human use elements. The Plan has identified ecosystem objectives for the following elements:

- benthic and pelagic communities and species, including cross-cutting issues such as species at risk and invasive species
- marine ecosystem productivity, including foodweb structure and interactions
- ocean habitats, including physical, geochemical and biological components

The Plan has also identified human use objectives for the following elements:

- community well-being
- economic well-being
- industrial capacity and assets
- integrated management process (*i.e.*, governance)

The objectives-based approach seeks to ensure that interrelationships among ecosystem and human use objectives are recognized and reflected in the identification of management strategies and actions.

AREA-BASED MANAGEMENT

The Plan also promotes an area-based approach to ensure that marine planning, management, and decision making occurs at appropriate spatial scales (*i.e.*, regional to site-specific). This involves the use of various tools and approaches for spatial planning, such as ocean use mapping, analysis and risk assessment, ecosystem classification and modeling, and the identification of ecologically, biologically and geologically significant areas in the planning area.

COLLABORATIVE PLANNING

The primary mechanisms for development and implementation of the Plan are provided through the Collaborative Planning Model. This collaborative planning structure and process has the following institutional components:

- ***The ESSIM Forum*** – an inclusive assembly for all organizations, groups and individuals to provide multi-stakeholder communications, dialogue, information sharing and input to the planning process.

- ***The Stakeholder Roundtable*** – a core, representative multi-stakeholder working group to provide regular input, advice and support to the planning process.

- ***The Government Sector Structure*** – an institutional governance mechanism that intersects and works within the Collaborative Planning Model to provide intergovernmental coordination and support to the planning process. It is comprised of the program-level Federal-Provincial ESSIM Working Group and the senior-level Regional Committee on Ocean Management (RCOM).

- ***The Planning Office*** – DFO staff (housed within the Oceans and Coastal Management Division, Maritimes Region) to provide leadership and expertise in planning, coordination and support for the planning process, and liaison with stakeholders and external agencies and processes.

The Collaborative Planning Model is designed to provide opportunities and practical mechanisms for input, review, acceptance, approval and implementation of the Plan by government authorities and ocean sectors and communities of interest.

MANAGEMENT STRATEGIES AND ACTIONS

The Plan is organized around management needs and priorities related to multiple ocean use, marine ecosystem management and conservation, and collaborative planning and management coordination. A set of fourteen management strategies with supporting actions are presented as follows:

Multiple human use

- Develop and implement an objectives-based framework for sustainable human use
- Identify, manage and avoid spatial and/or temporal conflicts involving multiple users

Marine ecosystem management and conservation

- Develop and implement an objectives-based marine ecosystem management and conservation framework
- Identify ecologically, biologically and geologically significant areas for use in planning, assessment and decision making
- Develop and implement benthic ecosystem and habitat protection strategies
- Develop and implement a regional marine protected areas system plan
- Develop and implement recovery strategies for aquatic species at risk

- Develop and implement prevention strategies for ship-source impacts on the marine environment
- Develop and implement strategies to minimize impacts from sources of acoustic energy in the marine environment
- Develop process for assessing cumulative environmental impacts from multiple activities at appropriate scales

Collaborative planning and management coordination

- Build long-term collaborative planning process for the Integrated Ocean Management Plan
- Develop frameworks for performance monitoring, reporting, compliance promotion and accountability for the Integrated Ocean Management Plan
- Develop mechanisms for improved ocean awareness and information sharing
- Increase opportunities for intergovernmental and interdepartmental cooperation for cross-cutting regional ocean management-related issues

PLAN IMPLEMENTATION AND REVIEW

The management objectives, strategies and actions contained in the Plan will be prioritized and implemented primarily through the use of shorter term (*i.e.*, 2-3 year) action plans. Action plans are designed to provide a high level of detail and direction on specific management actions, including roles and responsibilities, timelines, milestones and targets, and specific activities for successful completion.

A practical system for performance monitoring and reporting will be used to measure progress for the Plan. This is an integral component of the objectives-based management approach, based on the use of outcome and management performance indicators.

The Plan will undergo a full review every five years. This time period will facilitate the completion of two action planning cycles.

THE EASTERN SCOTIAN SHELF INTEGRATED OCEAN MANAGEMENT PLAN

The Eastern Scotian Shelf Integrated Management (ESSIM) Initiative is a collaborative ocean planning process being led and facilitated by the ESSIM Planning Office, housed in the Oceans and Coastal Management Division, Fisheries and Oceans Canada (DFO), Maritimes Region. The primary aim of the Initiative is to develop and implement an Integrated Ocean Management Plan for this large marine region.

What is the Plan?

The Eastern Scotian Shelf Integrated Ocean Management Plan is a multi-year, strategic-level plan to provide long-term direction and commitment for integrated, ecosystem-based and adaptive management of all marine activities in or affecting the planning area.

The Plan is focused on management needs and priorities related to multiple ocean use, ecosystem management and conservation, and collaborative planning and management coordination. This includes management issues related to access to ocean space and marine resources, and those involving ecosystem pressures and impacts, including cumulative effects from multiple human activities. The Plan also addresses ocean management issues requiring interdepartmental and intergovernmental policy and regulatory coordination.

The Plan is being developed through a collaborative and inclusive planning process. This means that the work of developing and implementing the Plan is done by all sectors and stakeholders through a consensus-based approach. The proposed Collaborative Planning Model for the ESSIM Initiative includes mechanisms for intergovernmental policy and program coordination, and effective participation by all stakeholders in all aspects of the planning process. The goal of the collaborative process is to develop a Plan that is accepted by stakeholders, endorsed by management and regulatory authorities, and designated under the *Oceans Act* by the Minister of Fisheries and Oceans.

The Plan provides an objectives-based approach to ocean management for the Eastern Scotian Shelf. It contains a set of long-term, overarching ecosystem and human use objectives to support agreed upon outcomes for environmental, economic, social and institutional sustainability in the planning area. These high-level objectives are supported by operational objectives – for which specific indicators and targets can be set – and associated management strategies and actions. The objectives-based framework ensures that interrelationships among ecosystem and human use objectives are recognized and reflected in the identification of monitoring and management actions.

The Plan also provides an area-based approach whereby planning, management, and decision making for multiple human use and ecosystem conservation can be undertaken at appropriate spatial scales (*i.e.*, regional to site-specific).

The Plan functions as an umbrella for various ocean sector management processes and is built on and supported by existing management jurisdictions and responsibilities. Regulatory

authorities remain responsible and accountable for implementing management policies and measures within their established mandates and jurisdiction.

The Plan is not intended to provide a detailed prescription of all measures required to achieve its management objectives. Rather, the aim of the Plan is to augment or enhance existing decision-making processes by linking sector planning and management to an overarching set of management objectives and targets. In many cases, this is accomplished by reference and linkages within the Plan to existing management plans and mechanisms. The Plan identifies specific management strategies and actions for inclusion in sector-based management processes to support broader objectives and desired outcomes and conditions.

Action plans will be developed for two-to-three year periods as part of the plan implementation process. These action plans will provide further detail, including timelines and targets, for the implementation of management strategies and actions contained in the Plan. As the planning process evolves, monitoring and performance measurement mechanisms will be established to enable regular evaluation and reporting on the Plan's objectives. The Plan will undergo a full review every five years.

LEGISLATIVE BASIS

The legislative basis for the Plan is drawn from Canada's *Oceans Act*[1], in accordance with the provisions contained in Sections 31 and 32 of *Part II, Oceans Management Strategy*:

Section 31, *Integrated management plans*

> The Minister [of Fisheries and Oceans] in collaboration with other ministers, boards and agencies of the Government of Canada, with provincial and territorial governments and with affected aboriginal organizations, coastal communities and other persons and bodies, including those bodies established under land claims agreements, shall lead and facilitate the development and implementation of plans for the integrated management of all activities or measures in or affecting estuaries, coastal waters and marine waters that form part of Canada or in which Canada has sovereign rights under international law.

Section 32, *Implementation of integrated management plans*

> For the purposes of the implementation of integrated management plans, the Minister [of Fisheries and Oceans]
>
> (a) shall develop and implement policies and programs with respect to matters assigned by law to the Minister
>
> (b) shall coordinate with other ministers, boards and agencies of the Government of Canada the implementation of policies and programs of the Government with respect to all activities or measures in or affecting coastal and marine waters
>
> (c) may, on his or her own or jointly with another person or body or with another minister, board or agency of the Government of Canada, and taking into consideration the views of other ministers, boards and agencies of the Government of Canada, provincial and territorial governments and affected aboriginal organizations, coastal communities and other persons and bodies, including those bodies established under land claims agreements,

[1] *Oceans Act* 1996, c. 31. Available online: <http://laws.justice.gc.ca/en/O-2.4/text.html>.

(i) establish advisory or management bodies and appoint or designate, as appropriate, members of those bodies, and

(ii) recognize established advisory or management bodies; and

(d) may, in consultation with other ministers, boards and agencies of the Government of Canada, provincial and territorial governments and affected aboriginal organizations, coastal communities and other persons and bodies, including those bodies established under land claims agreements, establish marine environmental quality guidelines, objectives and criteria respecting estuaries, coastal waters and marine waters.

The Plan is supported by all provisions of the *Oceans Act* as they generally apply to the development and implementation of integrated management plans and related measures, including those for marine protected areas and marine environmental quality.

POLICY AND MANAGEMENT CONTEXT

The *Oceans Act* and its supporting policy, *Canada's Oceans Strategy*[2], affirm DFO's mandate as the lead federal authority for oceans and provide the national policy context for integrated ocean management. DFO's *Policy and Operational Framework for Integrated Management of Estuarine, Coastal and Marine Environments in Canada*[3] provides the national structure and guidance for the development of regional integrated ocean management and planning processes, such as the ESSIM Initiative. The principles and approaches of the national policy framework are rooted in developing international ocean governance processes and Canada's ocean-related international legal and stewardship commitments.

From international commitments to local action

The Plan is consistent with and supports the development of management strategies and actions for national, regional and local implementation of Canada's international ocean governance commitments, responsibilities and rights.

The Plan responds to the policy and governance objectives of *Canada's Oceans Strategy* and the national *Policy and Operational Framework for Integrated Management*. It is also well positioned to support Canada's new *Oceans Action Plan* – a federal interdepartmental program to implement national ocean policy and management objectives[4]. The four key pillars of the *Oceans Action Plan* are: (i) international leadership, sovereignty and security; (ii) integrated ocean management; (iii) health of the oceans; and (iv) ocean science and technology. The Scotian Shelf has been identified as one of five priority planning areas in Canada. As such, the

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[2] Fisheries and Oceans Canada. 2002. *Canada's Oceans Strategy*. Available online: <http://www.cos-soc.gc.ca/doc/publications_e.asp>.

[3] Fisheries and Oceans Canada. 2002. *Policy and Operational Framework for Integrated Management of Estuarine, Coastal and Marine Environments in Canada*. Available online: <http://www.cos-soc.gc.ca/doc/publications_e.asp>.

[4] Canada's *Oceans Action Plan* is currently in the final review and approval stages within the federal government, with official release anticipated for Spring 2005.

ESSIM Initiative is the primary vehicle for implementing the *Oceans Action Plan* in this region, including priority actions for improving ocean and fisheries governance and ecosystem-based management.

The management and regulation of ocean use in the planning area involves a large number of federal and provincial government departments and agencies.[5] The Plan operates within this multi-jurisdictional context and respects existing legal and administrative jurisdictions within the federal Government of Canada, provincial governments and their agencies. Regulatory authorities retain their roles and responsibilities for implementing management policies and measures within their established mandates and jurisdiction. As such, federal and provincial departments are expected to support plan implementation through their respective legislative and regulatory jurisdictions, as appropriate.

The Plan recognizes the importance of First Nations in the governance and use of ocean resources. Implementation of the Plan will be in collaboration with affected aboriginal organizations, including those bodies established under land claims agreements.

VISION, GOALS AND GUIDING PRINCIPLES

VISION STATEMENT

The vision for the ESSIM Initiative is *an effective, collaborative process that provides integrated, ecosystem-based and adaptive ocean management plans, strategies and actions for sustainability in the Eastern Scotian Shelf marine system.*

> **FEEDBACK**
>
> The ESSIM vision statement presented above describes the *planning and management process* that we would like to have in place. Should we broaden our vision statement to describe desired outcomes? If so, what might be included?

OVERARCHING GOALS

The four overarching goals of the ESSIM Initiative are drawn from the Preamble of the *Oceans Act*:

- to integrate the management of all measures and activities in or affecting the planning area
- to manage for conservation, sustainability and responsible use of ocean space and marine resources

[5] G. Chao, G. Herbert, S. Coffen-Smout and H. Breeze. 2004. *Overview of Federal, Provincial and International Ocean Regulatory and Policy Frameworks on the Scotian Shelf*. Can. Tech. Rep. Fish. Aquat. Sci. 2513: xii + 231 pp.

- to restore and/or maintain natural biological diversity and productivity
- to contribute to social, cultural and economic well-being for stakeholders and coastal communities

Where does the Plan fit in?

The purpose and intent of the Plan is *to provide strategic, long-term direction and a common basis for commitment and action to achieve the vision, goals and management objectives of the ESSIM Initiative.*

GUIDING PRINCIPLES

The Plan is based on the following guiding principles and approaches:

Integrated management: A comprehensive and coordinated approach to planning and decision making for sustainability, based on the balanced consideration of the full range of interests and environmental, social, cultural, economic and institutional objectives for a management area.

Ecosystem-based management: The management of human activities so that ecosystem components, functions and properties are restored and/or maintained at appropriate temporal and spatial scales. Ecosystem objectives are used to identify and set desired ecosystem conditions, measurable indicators for monitoring and evaluation, and operational measures and actions to ensure that conditions are met and maintained.

Sustainable development: A development process that takes into account environmental, economic, social and cultural values in meeting the needs of the present without compromising the ability of future generations to meet their own needs.

Precautionary approach: An evaluation and decision-making process that errs on the side of caution and is applied to cases where there is a risk of serious or irreversible harm, significant scientific uncertainty, and a management decision must be taken. The precautionary approach is applied to decisions with potential ecosystem, social, cultural and economic impacts.

Multiple use management: A component of integrated management that focuses on achieving an acceptable balance of use for a management area, based on agreed-upon environmental, social, cultural, economic and institutional objectives.

Conservation: An approach that ensures the protection, maintenance and rehabilitation of living marine resources, their habitats and supporting ecosystems. Conservation is considered as both a principle to be incorporated into all ocean activities and a use of ocean space and resources in the context of multiple use management.

Collaboration: An open, inclusive and transparent planning, advisory and decision-making process involving all interested and affected parties. Ocean management plans and decisions are based on shared information where those with the decision-making authority and those affected by the decision jointly seek outcomes that meet the needs and interests of all parties to

the greatest possible degree. A consensus-based approach is the preferred method for collaborative planning. Under this approach, those with the authority, power and responsibility to implement agreed-upon management plans and measures will be expected to do so as part of their commitment to the planning process.

Adaptive management: The integrated management and planning process is adaptive and responsive to the changing environmental, social, economic and institutional conditions. Ongoing monitoring and regular review of management plans and actions are used to measure and evaluate progress on management objectives and to identify alterations and revisions required to address changing conditions or improved levels of knowledge.

Stewardship: An ethic of active participation and sharing of responsibility to care for ocean ecosystems and resources as parts of a natural life-support system and to sustain and enhance it for generations to come. Stewardship refers to the wide-range of actions and activities of individuals, communities, groups and organizations acting alone or in partnership to develop and use all natural resources in a sustainable manner, and to maintain the ecosystems on which life depends.

FEEDBACK

Do you agree with these guiding principles? Are there other principles that should be included?

THE PLANNING AREA

The current planning area boundaries encompass the Eastern Scotian Shelf and adjacent slope area. This area was selected for integrated ocean management because it possesses important living and non-living marine resources, areas of high biological diversity and productivity, and increasing levels of multiple use and competition for ocean space and resources.

PLANNING AREA BOUNDARIES

The planning area is extensive, encompassing approximately 325,000 square kilometres. The boundaries comprise a mix of existing administrative and ecological considerations. The area corresponds with Northwest Atlantic Fisheries Organisation (NAFO) fisheries management division 4VW. The western boundary is defined by the NAFO 4WX line that extends south from Halifax between LaHave Basin and Emerald Basin, bisecting the Scotian Shelf. The eastern boundary is the NAFO 4V/3PS line running through the Laurentian Channel and into the Gulf of St. Lawrence. The 4V/3PS line is also the regional administrative boundary for DFO Maritimes, and roughly corresponds with the eastern margin of the Scotian Shelf. The planning area extends seaward to the outer limit of Canadian jurisdiction as defined by national and international law (*i.e.*, the juridical continental shelf). ***Although the ESSIM Initiative is addressing ocean uses and management issues***

that occur both offshore and in coastal waters (e.g., commercial shipping), the focus of the initial Plan is the offshore, specifically beyond the 12 nautical mile Territorial Sea limit. Complementary coastal management plans will be developed in collaboration with the Province of Nova Scotia, coastal communities and other ocean-related interests.

Why does the Plan have an offshore focus?

The ESSIM Initiative is Canada's first and only integrated management process with an offshore focus under the *Oceans Act*. It is recognized that the management needs and approaches for the offshore differ in many ways from those for coastal areas, particularly in terms of the jurisdictional context, ocean use patterns, ecosystem characteristics, and communities of interest.

MARINE ENVIRONMENT

The planning area has a diversity of physical habitats. Large shallow banks are found in the outer part of the shelf, with basins and smaller banks in the middle and inner shelf. The planning area also includes portions of the continental slope and rise. The slope is indented by several submarine canyons, including the Gully – the largest canyon in the Northwest Atlantic. The mean surface circulation on the eastern shelf is dominated by the Nova Scotia Current, a southwestward flowing current largely originating in the Gulf of St. Lawrence. Waters of the slope are highly influenced by the cool, relatively fresh Labrador Current, which flows southwestward along the edge of the shelf, and the warmer, saltier Gulf Stream which flows northeastward. Waters from the Gulf Stream and Labrador Current mix over the continental slope. On the shelf itself, there are smaller scale surface circulation patterns, with anticyclonic circulation tending to occur over the banks and cyclonic circulation around the basins. The northeastern region of the shelf is the southern-most limit of winter sea ice in the Atlantic Ocean.[6]

A number of components of the Eastern Scotian Shelf ecosystem have changed as a consequence of human actions and environmental variability.[7] The change has been rapid (over 30 years) and large in magnitude. Important changes in water temperature, primary and secondary production, and species patterns have been observed. From a species perspective, some groups are proliferating, such as pelagic fishes and some benthic invertebrate species, while others are not rebuilding as quickly as expected, most notably groundfish. Physical habitat changes have also occurred due to human use and species abundance and range shifts.

HUMAN USE

Multiple ocean use involving a variety of human activities occurs in the planning area, both on a year-round and seasonal basis. Key ocean uses include:

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[6] H. Breeze, D.G. Fenton, R.J. Rutherford, and M.A. Silva. 2002. *The Scotian Shelf: An ecological overview for ocean planning*. Can. Tech. Rep. Fish. Aquat. Sci. 2393: x + 259 pp

[7] Fisheries and Oceans Canada (Maritimes Region). 2003. *State of the Eastern Scotian Shelf Ecosystem*. CSAS Ecosystem Status Report 2003/04.

- commercial and recreational fisheries
- petroleum exploration, development, production and delivery (including pipelines and power cables)
- marine transportation and commerce
- government marine operations (such as Coast Guard and Maritime Forces)
- submarine telecommunication cables
- marine conservation
- aquaculture (currently limited to inshore areas)
- scientific research, monitoring and technology development
- recreation and tourism

These ocean uses are currently addressed through a complex range of sector-based management, regulatory and planning processes. Some portions of the planning area experience relatively high or intensive levels of use, such as heavily fished areas, hydrocarbon production areas, and high vessel traffic areas. For example, the shelf break has been subject to an increasing intensity of multiple use, including oil and gas development and a variety of fisheries. Other areas remain little to moderately used. In fact, the planning area is characterized primarily by relatively low-to-moderate levels and concentrations of multiple use. However, the current and anticipated expansion of some existing uses (*e.g.*, deep water fisheries), coupled with the potential for new ocean uses, such as offshore minerals development or wind power generation, underscores the growing requirement for effective multiple use management practices. There are also areas of importance and significance to specific user groups, such as traditional fishing spots or long-term research and monitoring sites. The value placed on access to such areas, including a sense of ownership and priority of use, must be considered when planning for and managing multiple use.

FUTURE CONSIDERATIONS

As required by the *Oceans Act*, DFO is working to establish integrated management plans for all Canadian marine waters over the long term. Achieving this will require the establishment of additional integrated management planning areas and possibly the expansion of existing planning areas. The national *Policy and Operational Framework for Integrated Management* sets out an approach for defining a network of areas within which integrated management can be implemented. This approach is based on the establishment of Large Ocean Management Areas (LOMAs) and smaller, nested, Coastal Management Areas (CMAs). LOMAs are defined as marine areas that extend from the coastline (including estuarine environments) to the limits of Canadian maritime jurisdiction, with boundaries based on a combination of ecological considerations and management or administrative units (*e.g.*, fishing zones). LOMAs provide a large-scale geographical and ecological basis for the application of ecosystem and human use objectives. They also define the geographical context for the establishment of collaborative planning systems to support integrated ocean management.

The current ESSIM planning area predates the release of the *Policy and Operational Framework for Integrated Management*, and is not officially defined as a LOMA. DFO is now in the process of defining appropriate planning areas for the Maritimes Region. Concurrently, alterations to the current planning area are being considered. Specifically, it has been proposed that the western boundary be moved to the Northeast Channel (dividing Browns Bank and Georges Bank) so as to include the entire Scotian Shelf.

There are both ecological and practical reasons for considering an expansion of the planning area to encompass the full Scotian Shelf. From a geomorphologic perspective, such an expansion would encompass the full physical shelf structure. This expansion has also been recommended as the most practical approach to ensuring that all waters off Nova Scotia are covered by integrated management processes, as required under the *Oceans Act*. For example, the eastern extent of the planning area for the Gulf of Maine Council (Canada-US) corresponds with the Northeast Channel and provides a logical boundary between the two complementary planning processes. Moreover, many human activities, management systems and datasets apply to the entire Scotian Shelf, and many of the participants in the ESSIM process are involved in activities that are shelf-wide in nature.

The decision regarding whether to expand the planning area requires input from all stakeholders in the ESSIM planning process. Stakeholders from the western shelf area are also being asked to provide input. Response thus far to the idea of expanding the planning area has been largely positive, although there is general agreement that if the expansion does occur, it should take place incrementally, with the initial focus continuing to be on the eastern shelf portions.

FEEDBACK

Should the boundaries of the current planning area be changed in any way? What are the main criteria that should be used for defining planning area boundaries?

As the ESSIM Initiative progresses, DFO will continue to work with provincial and municipal agencies, First Nations, and coastal communities in the development of complementary coastal management plans. A key example of this is the Bras d'Or Lakes Collaborative Environmental Planning Initiative. Coastal and watershed-based planning will be nested within the broader Plan so that management principles, objectives and approaches are consistent and complimentary for these shared ecosystems.

In recognition of the dynamic and transboundary nature of marine systems, the planning process will be linked and coordinated with management jurisdictions, processes, measures and activities in adjacent ocean and land areas.

SCOPE OF THE PLAN

The aim of the Plan is to provide a common basis for commitment and action to achieve sustainable and integrated ocean management in the Eastern Scotian Shelf planning area. The Plan is focused on three main thematic areas:

- multiple human use
- marine ecosystem management and conservation
- collaborative planning and management coordination

MULTIPLE HUMAN USE

The integrated management and planning process seeks to achieve a sustainable and practical balance of human use, based on agreed-upon ecosystem and human use objectives. The Plan supports the continuation of multiple ocean use involving a broad and diverse range of human activities.

One of the main purposes of the Plan is to provide guidance on management requirements resulting from interactions between and among ocean sectors and activity types. Current and potential multiple use interactions that fall within the scope of the Plan include the following:

- access to ocean space and marine resources by different users and interests
- activities within ocean sectors that affect other sectors and activities
- human activities that involve ecological pressures and impacts, including cumulative effects in terms of adjacency and timing of use

FEEDBACK

Are there other planning and management needs related to multiple ocean use?

MARINE ECOSYSTEM MANAGEMENT AND CONSERVATION

A core purpose of the Plan is to address management, planning and conservation requirements relating to ocean use pressures and ecosystem impacts resulting from various types of human use. Key conservation and ecosystem issues include those related to the following:

- living and non-living resource extraction
- marine and land-based pollution and contaminants
- human-generated acoustic levels and disturbances
- ecosystem alteration and degradation
- endangered, rare and unique species and their habitats
- areas of natural biological diversity, high productivity and critical/essential habitat (ecologically and biologically significant areas)
- fragmentation of habitat or interruption of movement/migration routes

- capacity of renewable resources for future generations
- introduced and invasive species
- cumulative, additive and synergistic effects due to temporal and/or spatial use overlaps
- changes related to climate change

FEEDBACK

Are there other types of ecosystem management and conservation issues that need to be included in the Plan?

COLLABORATIVE PLANNING AND MANAGEMENT COORDINATION

A key component of the Plan is the development and implementation of an effective collaborative planning process. This is addressed primarily through the Collaborative Planning Model contained in this document (see **COLLABORATIVE PLANNING MODEL**).

The Plan recognizes that the integrated management process operates within a range of existing administrative, legal, regulatory and management jurisdictions. These are based on and consistent with Canada's maritime zones of jurisdiction as defined in Part I of the *Oceans Act*, namely Internal Waters, Territorial Sea, Contiguous Zone, Exclusive Economic Zone, and the juridical continental shelf. Federal, provincial and international jurisdictions are applied variously within these maritime zones. All such jurisdictions, mandates and authorities are recognized and respected in the Plan.

Recognizing the fundamental requirement for management coordination and intergovernmental cooperation, the Plan aims to provide guidance in the following circumstances:

- management issues requiring interdepartmental and intergovernmental policy and regulatory coordination
- matters subject to jurisdictional overlaps among legislated authorities
- management needs not adequately covered by existing legislated authorities
- matters within the jurisdiction of a legislated authority that affect other jurisdictions
- matters within the jurisdiction of a legislated authority that require consistency with provisions of the Plan
- priority setting on matters requiring cooperation and coordination to achieve maximum levels of efficiency and effectiveness (*e.g.*, program delivery)

FEEDBACK

Does the Plan need to consider other types of management coordination needs?

COLLABORATIVE PLANNING MODEL

INTENT, FUNCTIONS AND OPERATING PRINCIPLES

Unlike more traditional planning processes, the ESSIM Initiative employs a multi-stakeholder, collaborative planning approach. This means that the work of developing and implementing the Plan is done by all sectors and stakeholders. The intent of this process is to develop a Plan that is accepted by stakeholders, endorsed by legislative and regulatory authorities, and designated under the *Oceans Act* by the Minister of Fisheries and Oceans.

This section contains the Collaborative Planning Model designed to support the integrated management process.[8]

The intent of the Collaborative Planning Model is not to supersede or interfere with the ability of federal and provincial departments and agencies to carry out their legislative mandates. They retain all authority, but work with other stakeholders within the process to develop and pursue shared goals relating to environmental, economic and social sustainability. If policy or regulatory adjustments are needed to achieve these goals, authority for making such adjustments rests with the responsible department or agency.

Operating principles for collaborative planning

The Collaborative Planning Model is founded upon the following operating principles:

- ***Jurisdiction***: management authorities and jurisdiction of government departments and agencies is acknowledged and affirmed
- ***Inclusion***: all stakeholders are included
- ***Consensus***: decisions and recommendations are made by consensus and the process includes mechanisms for dispute resolution
- ***Accountability***: accountability is expected of and demonstrated by all parties
- ***Evolution***: the process is designed to permit and support evolution and will be monitored and evaluated to support shared learning and adaptation
- ***Networking***: the process will continue to work through a network of stakeholders
- ***Transparency:*** decisions and recommendations are made openly, with information and results shared with all stakeholders
- ***Efficiency:*** issues are addressed in a timely manner
- ***Knowledge-based:*** decisions and recommendations are based on best available information

FEEDBACK

Are there other principles that should be included?

[8] For background and additional information on the Collaborative Planning Model, see Oceans and Coastal Management Report 2004-05, *Eastern Scotian Shelf Integrated Management Initiative: Proposed Collaborative Planning Model – A Discussion Paper*.

The Collaborative Planning Model has the following institutional components:

- The ESSIM Forum
- The Stakeholder Roundtable
- The Government Sector Structure
- The Planning Office

The ESSIM Forum is the collective of all organizations, groups and individuals who are stakeholders (*i.e.*, they may be impacted by, have the ability to impact, or have an interest in the ESSIM Initiative). Annual (or semiannual) workshops are held to punctuate work stages and receive broad input or feedback. Ongoing communication with the Forum participants is also provided through regular e-newsletters, web-based information and online discussions.

Leadership for the process and the actual work of developing the plan is provided jointly by the **Stakeholder Roundtable**, the Government Sector Structure and the ESSIM Planning Office. The Roundtable is broadly representative of ocean sectors, communities of interest and stakeholders. It is not anticipated that its size will increase beyond 26 (± 2) members without taking some steps to aggregate interests or use some other means to enable participation while maintaining a reasonable working size. Sub-groups may be struck as needed for task work and may draw members from the full ESSIM Forum and beyond. The Roundtable also links with related stand-alone initiatives, such as the Gully MPA Advisory Committee.

The **ESSIM Government Sector Structure** is an institutional governance mechanism that intersects and works within the Collaborative Planning Model. The Government Sector Structure has two components: a Federal-Provincial ESSIM Working Group and a Regional Committee on Ocean Management (RCOM). The RCOM mandate is regional and thus broader than the ESSIM planning area.

The **Federal-Provincial ESSIM Working Group** is comprised of representatives of all levels of government that have some regulatory responsibility and policy or program interest in the ESSIM planning area. The Working Group has been active since January 2001. At present, the Working Group has approximately 20 member departments and agencies. It is a place for information sharing and discussion of issues among government representatives and provides operational level support for the ESSIM Initiative. It is one of a number of sectoral coordination/liaison groups to support and facilitate full sectoral participation and representation in the planning process.

The proposed **Regional Committee on Ocean Management** (RCOM) is the senior executive forum for federal and provincial departments and agencies with ocean-related program activities. RCOM provides coordinated decision making at the intergovernmental and interdepartmental levels, internal oversight, monitoring and performance assessment of integrated management and planning processes, and formal, executive-level government involvement in the development and implementation of integrated management plans. Membership is comprised of senior federal and provincial representatives.[9] Co-chair functions are provided by the Regional Director-General, DFO, Maritimes Region, and a Deputy Minister of the Province of Nova Scotia.

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[9] The RCOM may include First Nations membership, as determined by the ongoing high-level negotiation process involving First Nations organizations, the Province of Nova Scotia and the Government of Canada.

The **ESSIM Planning Office** is housed within the Oceans and Coastal Management Division of DFO. Its role is to provide leadership and expertise in planning, coordination and support for the process, and liaison with stakeholders and external agencies and processes.

COMPONENTS OF THE COLLABORATIVE PLANNING MODEL

This section provides details on the ESSIM Forum, the Stakeholder Roundtable, the Government Sector Structure and the ESSIM Planning Office.

THE ESSIM FORUM

Purpose: The ESSIM Forum provides an inclusive assembly for all stakeholders to participate in the collaborative planning process. It serves as network for multi-stakeholder communications, information sharing and input to the ESSIM Initiative.

Membership: Open to all stakeholders and interested individuals. Sectoral participation includes: government, coastal communities, fisheries, oil and gas, marine conservation, telecommunications, shipping and academia. First Nations participation falls within the government sector as well as other sectors, such as fisheries and coastal communities.

Leadership: The ESSIM Forum does not have a formal leadership structure, such as a chair or co-chairs. Leadership is provided jointly by the Stakeholder Roundtable and the Government Sector Structure, with coordination and support from the Planning Office.

Meetings: Annual Forum meeting to review and discuss progress over the previous year and to provide input and guidance for regular action plans. Possible annual or semiannual local/community information and feedback workshops.

Decisions: The ESSIM Forum is not a decision-making body.

Sub-Groups: A representative committee is struck to guide and support planning for the annual ESSIM Forum Workshop.

Functions and Responsibilities:

- Develop broad vision, goals and strategic direction for the ESSIM Initiative.
- Function as an inclusive, multi-stakeholder forum for information exchange and dialogue.
- Review and provide feedback on planning documents and materials.
- Provide ideas, opinions and advice on a range of topics of importance for development of the Plan.

THE STAKEHOLDER ROUNDTABLE

Purpose: In cooperation with the Planning Office and the Government Sector Structure, the Stakeholder Roundtable provides shared leadership and coordination for development and implementation of the Plan. This includes ongoing monitoring, evaluation and plan revision as necessary. The Roundtable provides input to plan content and feedback on draft work done by

the Planning Office. It ultimately recommends the Plan for stakeholder acceptance, endorsement by decision-making authorities, and approval under the *Oceans Act*.

Membership: Balanced by sector and other criteria, such as group size, capacity, commitment and history. Members represent or are representative of sectors or the public. The optimum group size 26 (± 2), using methods such as coalitions and selective or rotational participation to keep the group at a manageable level. Members are appointed for 2-year and 3-year staggered terms to ensure continuity. The criteria and process for Roundtable membership selection is provided in Appendix B. The sector composition for the Roundtable is described in the box below.

ESSIM Stakeholder Roundtable: recommended membership breakdown

Government of Canada	3 members	Conservation Groups	2 members
Government of Nova Scotia	3 members	Community Groups	1 member
Government of Newfoundland & Labrador	1 member	Academic & Private Sector Research	2 members
Offshore Petroleum Boards	1-2 members	Transportation	1 member
Municipal Government	1-2 members	Telecommunications	1 member
First Nations	1-2 members	Tourism	1 member
Fisheries	3 members	Citizens at Large (optional)	1-2 members
Oil and Gas	2 members		

Total: 24-28 members

The proposed number of representatives for each sector has been developed with primary consideration given to the relative size of the sector, its complexity and the economic, social, environmental and legislative links to the planning area. Nomination of citizens at large may be done by DFO in consultation with the sectors and interests.

Leadership: Co-chairs are provided by a representative from the Planning Office and by a representative from the Roundtable membership (selected by vote). Co-chairs may rotate on an annual basis. Co-chairs should have the ability to be neutral when dealing with issues among multiple sectors or parties, have the confidence and respect of the members, and be able to resolve conflict and move a diverse group toward consensus. Co-chairs may need additional representation at the table for their respective organizations.

Meetings: Quarterly at a minimum. Task groups may meet more frequently, as necessary.

Decisions: Decisions regarding the Plan and planning process will be made by consensus *when possible*. Consensus means unanimous agreement of the Roundtable. Stating that a member can "live with" a result will constitute agreement. Interest-based negotiation (mutual gains) will be the preferred format for dialogue.

The Roundtable will develop its own protocols for working through situations in which consensus is difficult to reach, or where conflict needs to be resolved. A facilitator will be made available to provide support to the Roundtable. The facilitator will be content neutral and will assist the group in conducting dialogue and reaching consensus.

Routine administrative decisions will be made by consensus or, when time or other factors interfere, by majority vote. In the absence of consensus, or in specific circumstances, federal and provincial government departments and agencies will exercise their legislated mandates as necessary.

Sub-Groups: The Roundtable may form task groups to carry out specific assignments. It may increase efficiency to have a small group (or the co-chairs) oversee Roundtable administration with the Planning Office to avoid having administrative matters take up agenda time at regular meetings. Other sub-groups may be useful for specific purposes.

How should the Stakeholder Roundtable be formally established?

The Stakeholder Roundtable could be formally designated as a ministerial advisory body pursuant to Section 32 of the *Oceans Act*:

For the purpose of the implementation of integrated management plans, the Minister may…

i) establish advisory or management bodies and appoint or designate, as appropriate, members of those bodies; and
ii) recognize established advisory or management bodies…" (Section 32(c))

Alternatively, the Stakeholder Roundtable could receive initial recognition from the Regional Director-General of DFO Maritimes Region, with consideration given at a later date to formal designation as a ministerial advisory body.

FEEDBACK

Are there other options that could be considered?

Functions and Responsibilities:

- Provide shared leadership and coordination for development and implementation of the Plan, in cooperation with the Planning Office and the Government Sector Structure.
- Facilitate multi-stakeholder dialogue, conflict resolution and consensus-building.
- Provide input to the planning process and feedback on work done by the Planning Office.

- Liaise with parallel sector structures, including the Federal-Provincial ESSIM Working Group as necessary.
- Collaborate with the Planning Office to bring forward the draft Plan for acceptance by stakeholders, endorsement by decision-making authorities, and approval under the *Oceans Act*.
- Support ongoing monitoring and evaluation of the Plan, and collaborate on future revisions as necessary.

THE GOVERNMENT SECTOR STRUCTURE

The Government Sector Structure consists of the Federal-Provincial ESSIM Working Group and the Regional Committee on Ocean Management (RCOM).

Federal-Provincial ESSIM Working Group

Purpose: The Federal-Provincial ESSIM Working Group (established in January 2001) as an intergovernmental forum to focus on policy, management, operations and regulatory coordination for the ESSIM Initiative. The Working Group builds government support and cohesion for the ESSIM Initiative and carries out work in support of and as directed by the Regional Committee on Ocean Management.

Membership: Representatives of over 20 ocean-related federal and provincial departments, agencies and boards.

Leadership: Leadership and support are provided by the ESSIM Planning Office.

Meetings: Approximately 4-5 times per year, or as required.

Decisions: The group makes decisions by consensus; however, decisions are advisory in nature and non-binding on departments, agencies or boards.

Sub-Groups: Potential for use of committees, but there are none to date.

Functions and Responsibilities:

- Provide ongoing support and advice to the senior-level Regional Committee on Ocean Management in carrying out its functions and responsibilities.
- Review planning documents and reports.
- Provide guidance on the identification, definition and prioritization of ocean management issues and requirements.
- Provide advice on the design of collaborative management and planning processes.
- Support the development of the Plan, including the development, implementation and monitoring of management strategies and actions.
- Support communication and engagement strategy for the ESSIM Initiative.

Regional Committee on Ocean Management (RCOM)

Purpose: The Regional Committee on Ocean Management (RCOM) is the senior executive-level forum for federal and provincial departments and agencies with ocean-related program

activities. RCOM provides coordinated decision making at the intergovernmental and interdepartmental levels for:

- planning, management and regulatory matters for integrated ocean management
- internal oversight, monitoring and performance assessment of regional integrated management and planning processes
- formal and executive-level government involvement in the development and implementation of plans for regional integrated management and planning processes

RCOM is a body of decision-makers, each with mandated decision-making powers at the zonal/regional level. RCOM provides advice and recommendations to mandated decision-making processes to be implemented via the relevant government departments, agencies and boards.

The geographic focus for RCOM is integrated ocean and coastal management and planning processes within Nova Scotia. The geographic focus may be broadened to consider regional management and planning processes with links to New Brunswick, Newfoundland and Prince Edward Island.

Membership: Senior federal (Regional Director-General level) and provincial (Deputy Minister-level) representatives of government departments and agencies. Senior representatives of First Nations organizations may be invited to become RCOM members, as appropriate.

Leadership: Co-chaired by the Regional Director-General, DFO Maritimes Region, and a Deputy Minister of the Province of Nova Scotia.

Meetings: Semi-annually, or as required.

Decisions: RCOM makes decisions by consensus. Recommendations are non-binding on departments, agencies and boards.

Functions and Responsibilities:

- Represent the federal and provincial governments (and First Nations) at the executive level in regional integrated ocean and coastal management processes.
- Provide direction to operational-level government committees for integrated ocean and coastal management processes throughout the region (*e.g.*, the Federal-Provincial ESSIM Working Group).
- Serve in an advisory capacity to the federal and provincial Ministerial level through existing government line mechanisms.
- Strive to reach consensus while representing departmental/organizational mandates and considering the range of opinion.
- Review and comment on integrated ocean and coastal management plans, policy papers, and initiatives of multi-stakeholder planning groups and the ESSIM Planning Office.
- Provide coordination and harmonization of regulatory approaches, policies and programs across government with respect to regional integrated management and planning processes.
- Monitor and review government planning, policy coordination and program implementation across government.

- Support and oversee information-sharing mechanisms among departments and agencies to support initiatives led by one or more departments and agencies represented on RCOM.
- Receive the Plan when recommended by the Federal-Provincial ESSIM Working Group and the Stakeholder Roundtable and facilitate final approval by relevant government departments, agencies and boards, as required.

THE ESSIM PLANNING OFFICE

Purpose: The Planning Office provides shared leadership and coordination for development and implementation of the Plan, in cooperation with the ESSIM Stakeholder Roundtable and Government Sector Structure.

Membership: The Planning Office (formerly the ESSIM Forum Secretariat) is housed within the Oceans and Coastal Management Division (OCMD) of DFO Maritimes Region. It is possible that the core resources provided by DFO could be augmented by resources from other government departments, and eventually by non-governmental groups (*e.g.*, staff secondments and internships).

Leadership: The Planning Office has regional and national line reporting relationships within DFO.

Meetings: The Planning Office leads and facilitates the organization of meetings for the Stakeholder Roundtable, Government Sector Structure and broader ESSIM Forum, as required.

Decisions: The Planning Office has decision-making authority consistent with its line reporting relationships within DFO. The Planning Office may also participate in decision making within other components of the Collaborative Planning Model according to applicable processes (*e.g.*, consensus-based).

Sub-Groups: The Planning Office may assist in the establishment and operation of various sub-groups formed by other components of the Collaborative Planning Model.

Functions and Responsibilities:

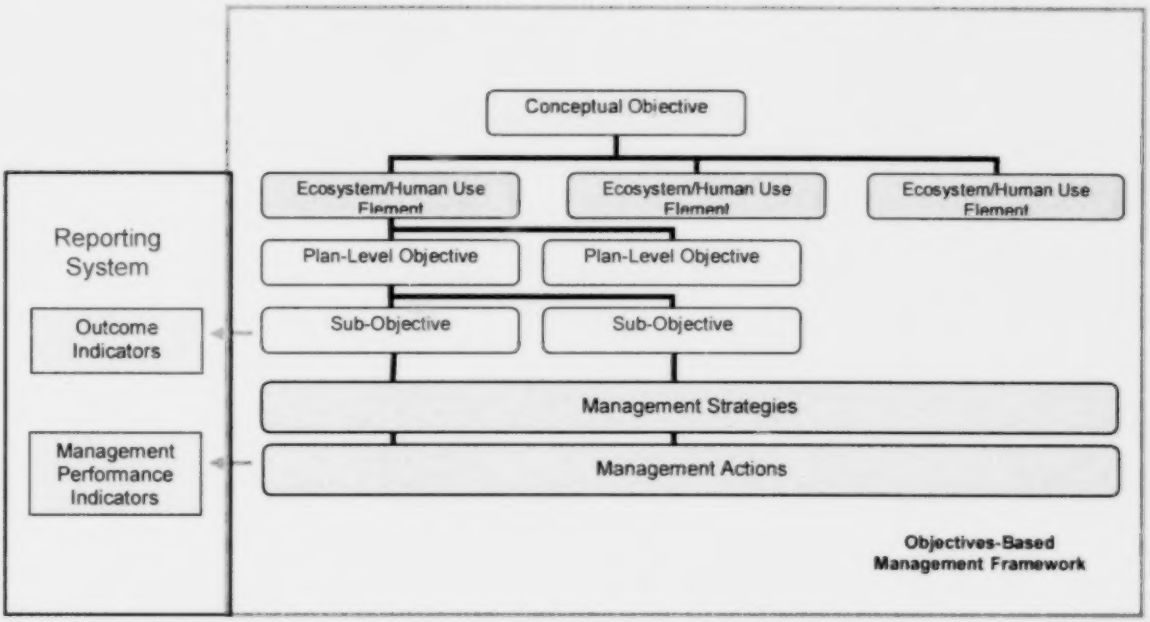
- Provide expertise in development of the Plan and related planning documents.
- Support the Collaborative Planning Model, including coordination functions for the ESSIM Forum, the Stakeholder Roundtable and the Government Sector Structure.
- Ensure that all sectors and stakeholders have input into discussions at the appropriate level, and that a range of engagement mechanisms is available to those who are unable to participate in group processes.
- Liaise with other regional, national and international integrated management processes.

FEEDBACK

Do you think that the Collaborative Planning Model will provide the necessary structures, mechanisms and opportunities for effective collaboration? How could it be improved?

OBJECTIVES-BASED MANAGEMENT FRAMEWORK

The Plan applies an objectives-based approach to integrated ocean management. This is based on a hierarchical framework, comprised of a set of management objectives and an accompanying reporting system. The objectives-based management framework is illustrated in the diagram below.



The objectives-based approach is essentially an outcomes oriented management system that ensures planning, development and management of marine areas and resources in a manner that addresses the multiple needs and expectations of society, without jeopardizing the options for future generations to benefit from the full range of goods and services provided by the ocean. The system requires objectives, not only to address the need for functional, healthy ecosystems, but also to address the issues surrounding human use of the ocean.

The objectives-based management framework has six tiers:

- **Conceptual objectives:** High-level objectives that provide the umbrella for development of all other objectives and outlines the principles upon which plan-level objectives and sub-objectives are chosen. In the context of human use objectives, the conceptual objective provides a vision with regard to the social, economic and institutional aspects as they relate to ecosystem-based management. In the case of ecosystem objectives, this is defined by the national-level conceptual objectives for biodiversity, productivity and habitat conservation.

- **Ecosystem/human use elements:** Recognized components for which objectives need to be developed in order to include all aspects expressed in the conceptual objective.

- **Plan-level objectives:** Second order objectives that are developed for each ecosystem and human use element. These objectives express a purpose or goal toward which the integrated management process should aim in order to achieve the conceptual objectives.

- **Sub-objectives:** Operational objectives that support the plan-level objectives. These objectives are expressed as outcomes and identify components of the plan-level objectives that require monitoring and management strategies and actions.

- **Management strategies:** Management strategies are the methods by which the integrated management process will achieve the plan-level objectives and sub-objectives. Due to the integrated nature of the planning process, management strategies are not linked to only one objective, but may meet the requirements of two or more objectives.

- **Management actions:** Actions undertaken in order to implement the management strategies. Management actions are typically linked to a timeframe within which they should be implemented.

FEEDBACK

Do you agree with the use of an objectives-based approach as the basis for integrated ocean management? Are there other approaches that should be considered?

Multi-stakeholder collaboration in developing management objectives: the ESSIM sub-regional planning exercise

One of the principal recommendations from the participants at the 2nd ESSIM Forum Workshop in February 2003 was the development of "case study" or focused planning exercise to show how integrated management could be undertaken within the Eastern Scotian Shelf planning area. The workshop participants identified a set of basic criteria to be used in selecting a case study area for the sub-regional planning exercise. It was recommended that the selected area include the following considerations:

- significant and/or increasing levels of multiple use to test planning approaches for addressing access to ocean space and resources;
- real and/or potential ecosystem impacts and concerns to test the utility of the integrated management process for ecosystem conservation and protection; and
- multiple (complex) management and regulatory jurisdictions to test policy coordination and management integration.

General agreement was achieved on the value of selecting an area comprised of two sub-regions, specifically the Sable-Banquereau and Northeast Slope areas, centrally located around the Gully and Sable Island. Consistent with the collaborative approach promoted by the ESSIM Initiative, a working group was formed to undertake the sub-regional planning exercise. This sub-regional planning group included representatives from various government departments, industry and resource user groups, conservation interests, and academia. The working group set out to develop a prototype integrated management plan for the case study area. To achieve its task, the working group established two sub-groups to develop operational frameworks for ecosystem objectives and human use objectives, respectively.

In the case of the human use objectives, the work of the sub-group led to a set of draft objectives covering community and economic well-being, industrial capacity and integrated management processes. DFO established a contract with expert consultants to hold a multi-stakeholder workshop to discuss the draft objectives and produce a report containing an initial set of objectives for inclusion in the Plan (see Appendix A for the report on *Human Use Objectives and Indicators Framework for Integrated Management on the Scotian Shelf*). The objectives presented in the Plan are drawn directly from this work.

In a similar manner, the ecosystem objectives sub-group put forward a set of potential objectives for key ecosystem elements in the planning area. These outputs were subsequently used by the DFO ESSIM Science Working Group in its work to further develop ecosystem objectives for the Plan.

Although the original goal of developing a prototype integrated management plan was not fully achieved, the ground-breaking developmental work undertaken by the sub-regional planning group has provided important contributions to the identification of ecosystem and human use objectives for the ESSIM Initiative, and in doing so, the foundation of the Plan.

ECOSYSTEM OBJECTIVES

This section contains a preliminary set of ecosystem objectives for the Plan. It also describes the ongoing process being used to further develop ecosystem objectives for integrated ocean management.

CONCEPTUAL OBJECTIVES

In 2001, DFO held a *National Workshop on Objectives and Indicators for Ecosystem-based Management*, frequently referred to as the Dunsmuir or Sidney Workshop, to discuss a national framework for ecosystem objectives (also referred to as *conservation* objectives, to distinguish them from human use objectives).[10] The resulting national DFO framework contains two overarching conceptual objectives for ecosystem-based management:

- the sustainability of human usage of environmental resources
- the conservation of species and habitats, including those other ecosystem components that may not be utilized by humans

The second of these objectives (*i.e.*, the conservation objective) is sub-divided into three more specific objectives:

- to conserve enough components (ecosystems, species, populations, etc.) so as to maintain the natural resilience of the ecosystem
- to conserve each component of the ecosystem so that it can play its historic role in the foodweb (*i.e.*, not cause any component of the ecosystem to be altered to such an extent that it ceases to play its historical role in a higher order component)
- to conserve the physical and chemical properties of the ecosystem

These three objectives are essentially aimed at preserving ecosystem structure (biodiversity), ecosystem function (productivity) and habitat, respectively. Through the national hierarchical framework (see diagram below), these objectives are broken down further for the purpose of defining more practical objectives that can be stated in terms of specific indicators and reference points for individual elements of the ecosystem. This process, which is inherently "top-down" in nature since it starts from the most general goal and works towards specific objectives, is called "unpacking" the objectives. The general principles implicit in the hierarchy shown in the diagram have been accepted by DFO as a useful framework and are being used to structure discussion of ecosystem objectives.

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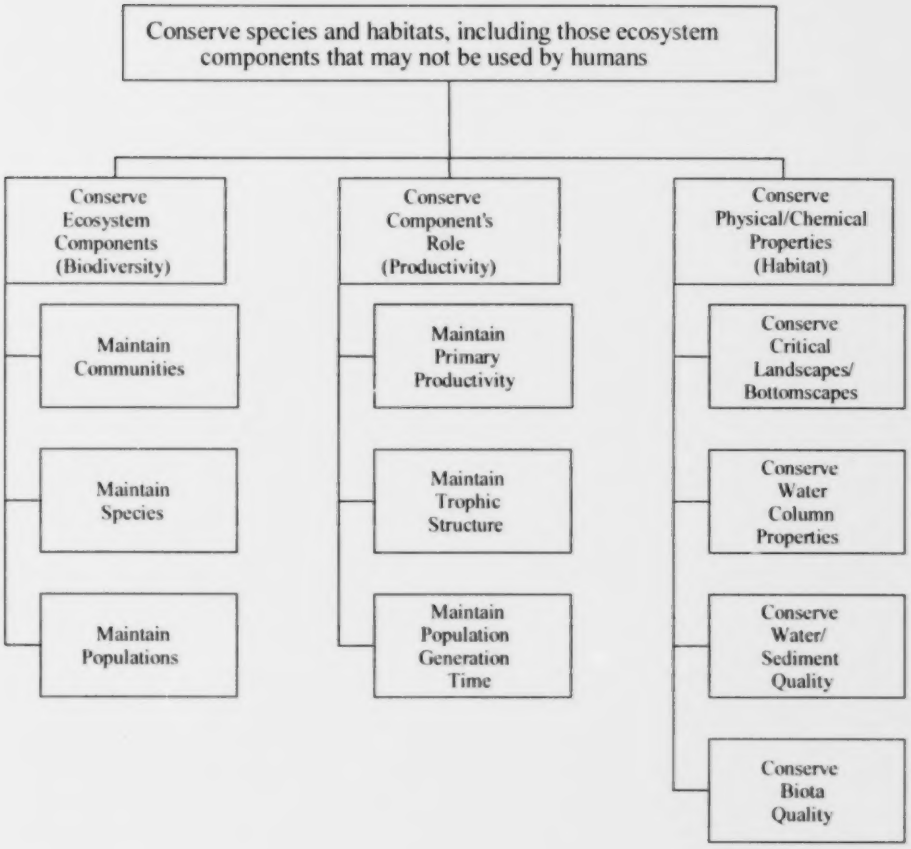
[10] G. Jamieson and R. O'Boyle (eds.) 2001. *Proceedings of the National Workshop on Objectives and Indicators For Ecosystem-based Management, Sidney, British Columbia, 27 February – 2 March 2001.* CSAS Proceedings Series 2001/09.

National DFO Framework for Ecosystem Objectives


Conserve species and habitats, including those ecosystem components that may not be used by humans
Conserve Ecosystem Components (Biodiversity)
Maintain Communities
Maintain Species
Maintain Populations
Conserve Component's Role (Productivity)
Maintain Primary Productivity
Maintain Trophic Structure
Maintain Population Generation Time
Conserve Physical/Chemical Properties (Habitat)
Conserve Critical Landscapes/ Bottomscapes
Conserve Water Column Properties
Conserve Water/ Sediment Quality
Conserve Biota Quality

Regional Efforts to Implement the National Framework

DFO Maritimes Region has undertaken initial work to apply the unpacking approach in developing operational objectives for several sectors, such as the groundfish fishery, aquaculture, and offshore oil and gas.[11] However, the process for completely unpacking the conceptual objectives to obtain useful, operational objectives has proven problematic, both because of redundancies in the hierarchy and, more importantly, because the process, as currently realized, is not conducive to the participation of stakeholders. Related work by the multi-stakeholder sub-regional planning group for the ESSIM Initiative emphasized a "bottom-up" approach that first identifies ecosystem elements or issues of concern. The bottom-up

[11] R. O'Boyle and P. Keizer. 2003. *Proceedings of three workshops to investigate the unpacking process in support of ecosystem-based management; February – July, 2002.* CSAS Proceedings Series 2003/004.

approach also has difficulties, the most important of which is that it tends to produce long lists of ecosystem elements that require protection, but no context in which to set priorities or account for interactions among elements.

The Maritimes Region ESSIM Science Working Group was established in late 2003 to foster DFO Science input to the integrated management process, and more specifically, to develop operational conservation objectives for the planning area. The Science Working Group has adopted, and in some cases added to, the list of ecosystem elements, issues and potential objectives developed by the multi-stakeholder sub-regional planning group. Further, the list has been categorized in terms of DFO's national objective hierarchy, thus using elements of both the top-down and bottom-up approaches. A significant step was also taken when the Science Working Group adopted a proposed implementation framework[12] that describes how operational objectives can be implemented in a hierarchical management structure that includes both general objectives and objectives that are specific to individual sectors and sub-sectors of marine interests.

To move forward in the development of objectives, the Science Working Group is preparing a series of worksheets for specifying operational conservation objectives. Included in the development of these objectives are specific recommendations for indicators and reference points. To maintain compatibility with the *Oceans Act*, both target and limit reference points are being defined; these may be thought of as desirable and minimum acceptable states, respectively.

In designing this process for the development of operational objectives, the Science Working Group recognized that a truly ecosystem-based approach to integrated management requires an understanding of the important interactions among ecosystem components, and how actions that are targeted at each component may affect the rest of the ecosystem. The Science Working Group is now in the process of developing such an ecological assessment, tentatively titled *Implications of Ecosystem Dynamics for the Environmental Management of the Eastern Scotian Shelf*. This assessment document both informs and is informed by work on the operational objectives, and work is proceeding on both fronts. Over the coming months, the Science Working Group will aim to consolidate and clarify the objectives currently under development. Once that detailed work is complete, a scientific review of this tentative list of operational objectives will be performed, and the objectives and the process will be presented to the broader stakeholder community for input and debate. As this work progresses, the operational objectives will be incorporated in future versions of the Plan, as will a summary of the ecological assessment.

ECOSYSTEM ELEMENTS AND PLAN-LEVEL OBJECTIVES

The table below has been adapted from working documents being used by the Science Working Group. It serves to illustrate the range of ecosystem elements and issues for which objectives are being developed, and does not necessarily include the final objectives for the Plan. Objectives identified as "Monitoring only" reflect the need to monitor some environmental properties that impact the ecosystem but which are not subject to management actions.

[12] R. O'Boyle, M. Sinclair, P. Keizer, K. Lee, D. Ricard and P. Yeats. 2004. *Indicators for Ecosystem-Based Management on the Scotian Shelf: Bridging the gap between Theory and Practice*. CSAS Research Document (in press).

Ecosystem Element	Issue	Plan-Level Objective
Community-related objectives		
Benthic communities	Important communities	Identify and protect important benthic communities (*e.g.*, highly diverse or unique communities, productivity hotspots)
	Sensitive communities	Identify and protect coral communities in the Gully and Stone Fence areas
		Identify and protect other sensitive benthic communities
Pelagic communities	Important communities	Identify and protect important pelagic communities (*e.g.*, highly diverse or unique communities, productivity hotspots)
	Sensitive communities	Identify and protect sensitive pelagic communities
Communities/ assemblages	Conservation of communities	Maintain/restore identified pelagic fish communities/assemblages (including marine mammals, large pelagics)
		Maintain/restore identified demersal communities/assemblages
		Maintain/restore identified benthic communities/assemblages
		Maintain/restore identified seabird communities/assemblages
Species-related objectives		
Commercially harvested species (objectives for each commercially important species)	Biomass and productivity of finfish	Maintain/restore species, populations and productivity
Species at risk (objectives for each aquatic and seabird species)	Endangered species	Protect and rebuild species

Ecosystem Element	Issue	Plan-Level Objective
Cross-cutting objectives		
All species	Ecosystem structure and function	Maintain/restore bycatch of non-target species within acceptable limits
Invasive species	Ecosystem structure and function	Limit and monitor invasive species
Genetic diversity	Ecosystem resilience	Maintain/restore genetic diversity
Productivity-related objectives		
Phytoplankton/ zooplankton	Ecosystem structure and function	Monitor base of the food chain to detect changes that may affect other ecosystem components (monitoring only)
		Monitor environmental conditions that may influence productivity of base of the food chain (monitoring only)
Trophic structure	Ecosystem function	Preserve natural trophic structure. Preserve adequate forage species for higher level predators
		Preserve traditional role of top predators
Habitat-related objectives		
Rare habitats	Diversity of habitats	Identify and protect rare habitats
Bottom habitat	Physical characteristics of the bottom	Maintain/restore physical characteristics of sediments that are conducive to resident biological populations, and diversity of bottom types
	Geochemical processes in sediments	Maintain/restore geochemical conditions (*e.g.*, sulfide, redox potential, organic matter content, carbon:nitrogen ratios etc.) conditions necessary for functioning of resident community

Ecosystem Element	Issue	Plan-Level Objective
	Toxic chemical contamination of the sediments	Maintain/restore concentrations of toxic chemicals below levels that are harmful to resident biota
Sound environment	Excessive sound levels	Maintain/restore sound levels necessary to protect resident species
Water column	Eutrophication	Maintain/restore O_2 concentrations that are sufficient for productive growth of resident biota
	Chemical contamination	Maintain/restore concentrations of toxic chemicals in water below levels that will cause harm to resident biota
Solid wastes	Non-biodegradable debris	Maintain/restore amounts of solid wastes within acceptable limits
Biota quality	Health of resident biota	Maintain/restore marine environmental quality that is conducive to production of healthy biota
	Contaminant levels in fish	Prevent chemical or biological contamination of species that could be consumed by humans

FEEDBACK

Do you feel that the objectives presented here provide a practical and adaptable basis for ecosystem management and conservation in the planning area? Are there other objectives that could be included?

HUMAN USE OBJECTIVES

This section presents a set of management objectives for achieving sustainable human use in the planning area.[13]

CONCEPTUAL OBJECTIVE

The overarching conceptual human use objective for the Plan is as follows:

> ***To contribute to social, cultural and economic well-being by achieving ecologically sustainable and integrated use of the ocean space and resources in the planning area.***

The intent of the overarching objective is to contribute to the overall well-being of communities and people within Nova Scotia. These priority communities include coastal and fishing communities, First Nations communities, and urban communities, such as Halifax and Sydney. This does not mean that integrated management of the planning area will not have benefits outside Nova Scotia (*i.e.*, Atlantic region, national scale), but rather that the focus is on communities within Nova Scotia.

The overarching objective is underpinned by the fundamental concepts of ecological sustainability and multiple human use in the planning area. These concepts are implicit in all supporting human use objectives contained in the Plan.

HUMAN USE ELEMENTS AND PLAN-LEVEL OBJECTIVES

The human use elements that contribute to the overarching conceptual objective are as follows:

- community well-being
- economic well-being
- industrial capacity and assets
- integrated management process

A single plan-level objective has been developed for each human use element:

HUMAN USE ELEMENT	PLAN-LEVEL OBJECTIVE
Community well-being	To contribute to the long-term social and cultural well-being of communities in Nova Scotia
Economic well-being	To contribute to wealth generation through activities related to the ocean system and distribution according to societal objectives

[13] For background on the process used to date for developing the human use objectives for the Plan, see Oceans and Coastal Management Report 2005-03, *Human Use Objectives and Indicators Framework for Integrated Management on the Scotian Shelf*.

Industrial Capacity and Assets	To support commercial activity and other non commercial uses within the bounds of ecosystem capacity, while incorporating a culture of resource stewardship
Integrated Management Process	To develop institutional arrangements and capacities, and appropriate management strategies and actions that contribute to integrated ocean management

Community Well-Being: ***To contribute to the long-term social and cultural well-being of communities in Nova Scotia***

This objective encompasses the general well-being of people in Nova Scotia. Well-being can be defined as "experience of a good quality of life". This objective is focused on the social and cultural aspects of well-being, with the economic aspects being addressed in a complementary objective.

What is social and cultural well-being?

Social well-being is related to aspects such as social structures (cohesion and interrelationships; political structures and institutions), education levels, health, safety and security, public infrastructure and social services. Culture is defined as the way of life of a group of people, including the behaviours, beliefs, values and symbols that they accept, and that are passed along from one generation to the next. Often, if the social well-being of a community is assured, the cultural well-being is also assured.

This objective is primarily focused on communities within Nova Scotia, although it does not preclude benefits from accruing to people outside the province. A community may be defined as a social group of any size whose members reside in a specific locality, share government and often have common cultural and historical heritage. A community may also be defined in terms of collective interests or sectors, such as those engaged in specific types of ocean use activities. Identification of community boundaries still remains elusive in many cases, particularly in urban settings. In Nova Scotia, however, some communities are well-defined and may be able to be used as proxies for Nova Scotian communities in general (*e.g.*, First Nations, fishing communities etc.). Communities of interest may include groups and individuals from within Nova Scotia and beyond.

Economic Well-Being: ***To contribute to wealth generation through activities related to the ocean system and distribution according to societal objectives***

It is anticipated that the Plan will contribute to wealth generation in Nova Scotia and in Canada generally through use of the ocean space and resources.

What is wealth?

Wealth is considered to be anything of value, including both monetary and non-monetary assets, and tangible and intangible benefits. Another term for wealth may be net benefits, as wealth implies that both costs and benefits have been taken into account. Wealth can be defined broadly as consisting of natural capital (natural resources), human capital (human resources and knowledge), social capital (interrelationships), and manufactured capital (machinery, equipment, etc.).

This objective is strongly linked to community well-being through the aim of distributing wealth according to societal objectives. However, the term societal refers to the broader society in Nova Scotia and Canada, and may not be linked to community well-being only. These societal objectives are currently not clearly defined, but it is assumed that integrated ocean management will influence equitable distribution of wealth through the process of changing priorities, both in government, industry and the broader population. In order to meet societal objectives, wealth needs to be retained within communities or within Nova Scotia.

Implicit in this objective is the requirement that, in order to conform to the overarching objective, wealth should be generated sustainably (*i.e.*, now and in the future). The Plan can influence the retention of intrinsic, intangible wealth in the form of protection or conservation of natural capital (*e.g.*, Sable Island, the Gully) and ensure that value is placed on natural capital.

Industrial Capacity and Assets: ***To support commercial activity and other non-commercial uses within the bounds of resource capacity, while incorporating a culture of resource stewardship***

The focus of this objective is on commercial activity, although it is recognized that non-commercial uses may have a cumulative effect that needs to be taken into account when determining resource capacity. It is based on the understanding that the ocean is a multiple use environment, with many offshore uses having commercial value.

There are several key themes integral to this element:

- Developing capacity in the ocean use sectors to make full use of the resources available, while minimizing conflict between users.
- Ensuring that there is not excess industrial capacity that will impact negatively on the ecological sustainability of the planning area. As expressed in the overarching objective, use of ocean resources should be sustainable (*i.e.*, within the carrying capacity of the ecosystem).
- Promoting an understanding of how resource stewardship can contribute to the maintenance of viable resources in the long-term. Resource stewardship calls upon all ocean users to assume responsibility for protecting the integrity of ocean resources and ecosystems.
- Recognition that industrial capacity is dependent ultimately on the economic viability of an industry.

Integrated Management Process: ***To develop institutional arrangements and capacity, and appropriate management strategies and actions that contribute to integrated ocean management***

This objective differs from the other objectives as it provides the processes and institutional platforms by which all of the other program objectives are met. It is critical to the success of implementing the Plan.

There are several components related to this objective:

- An interactive networking system of formal and informal structures within which relevant organizations and stakeholders exercise their responsibilities in the management and use of marine resources. This will be achieved through the development of collaborative planning structures that have the cooperation of all regulatory bodies, as well as stakeholder and community participation.

- The availability of information, such as stakeholder-developed documents that explain how marine resources within the planning area will be managed and how respective stakeholders are expected to carry out their activities. These will include documents on policy, planning, guidelines and relevant regulations and practices.

- The presence of relevant legislation and a management system that ensures that all applicable legal principles and responsibilities are evaluated and applied. This should also include a system to monitor compliance of both users and regulators.

- The presence of an effective communication system by which the public and stakeholders are made aware of, and are able to understand decisions that are made and activities that are undertaken.

- The presence of a management system that is continually evaluating the needs of the planning area, and adapting policies, plans, guidelines, budgets and practices to meet the demands created by such changes.

HUMAN USE SUB-OBJECTIVES

The table below provides a list of the sub-objectives selected for each human use element and plan-level objective.

Conceptual Objective: *To contribute to social, cultural and economic well-being by achieving ecologically sustainable and integrated use of the ocean space and resources in the planning area*		
Human Use Element	**Plan-Level Objective**	**Sub-Objective**
Community well-being (social and cultural)	To contribute to the long-term social and cultural well-being of communities in Nova Scotia	Access by coastal communities and all Nova Scotians to sustainable livelihood opportunities derived from ocean resources
		Nova Scotian communities are resilient
		Ocean-related education, training and awareness are enhanced
		Ocean-related services and infrastructure are enhanced
		Ocean-related human health, safety and security are enhanced
Economic well-being	To contribute to wealth generation through activities related to the ocean system and distribution according to societal objectives	Generate wealth from the ocean by fostering new opportunities and supporting existing opportunities
		Access to and distribution of wealth and benefits within coastal communities in Nova Scotia and Canada
		Efficiency of resource use and ocean space
Industrial capacity and assets	To support commercial activity and non-commercial uses within the bounds of resource capacity, while incorporating a culture of resource stewardship	Industrial infrastructure capacity is balanced with resource availability
		Multi-sectoral use is balanced and resource use conflict decreased on the Scotian Shelf
		Stewardship and best practices are promoted

Integrated management process	To develop institutional arrangements and capacity, and appropriate management strategies and actions that contribute to integrated ocean management	Collaborative planning structures with adequate capacity, which are accessible to community members
		Policies, plans, programs and measures applicable to ocean users
		Legal principles (international, federal and provincial) and responsibilities implemented
		Ocean user compliance with the Plan and regulator accountability toward the Plan
		An effective communication system by which the public and stakeholders are made aware of, and are able to understand, the planning process in terms of decisions, activities and implications
		Adaptive management in response to change

FEEDBACK

Do you think that the objectives presented here can provide a good basis for achieving more sustainable human use in the planning area? Are there other objectives that could be used?

IMPLEMENTING THE OBJECTIVES-BASED MANAGEMENT FRAMEWORK

Implementation of the objectives-based management framework requires the articulation of corresponding management strategies and actions, the design and development of a practical performance monitoring and reporting system, and the commitment to an agreed set of guidelines, or "decision rules" for integrating ecosystem and human use objectives.

Management Strategies and Actions

The management strategies and actions for the Plan are presented in series of tables organized according to the thematic areas of multiple human use, marine ecosystem management and conservation, and collaborative planning and management coordination (see **MANAGEMENT STRATEGIES AND ACTIONS**). The strategies and actions are designed to contribute to the

pursuit and implementation of the ecosystem and human use objectives. The linkages between the various objectives and the specific strategies and actions are identified in the tables. Owing to the integrated nature of the Plan, many of the strategies and actions contribute to multiple objectives.

Monitoring and Reporting

The reporting system for the objectives-based management framework provides a method to evaluate successful implementation of management actions and reflects progress towards the plan-level objectives and sub-objectives. The reporting system is indicator-based, with two main types of indicators: *outcome indicators* and *management performance indicators*.

- **Outcome Indicators:** Outcome indicators provide a measure of the success of the management objectives by quantifying the level of improvement in the marine system and assessing to what degree the objectives have been met. Within the objectives-based management framework, the outcome indicators are directly linked to the plan-level objectives and sub-objectives, and monitor progress towards meeting each objective over time. They may not cover all aspects of each objective, but should provide a good indication of the direction in which the system is moving.

- **Management Performance Indicators:** Management performance indicators provide an evaluation of the level of implementation of the Plan itself through management actions. They provide an assessment of the degree to which management actions have been carried out within a given time limit.

The main goal of establishing indicators for the Plan is to measure, monitor and report on progress towards meeting the objectives. Within this, indicators have numerous uses and potential for improving management, including the ability to monitor and assess conditions and trends, forecast changes and trends (such as providing early warning information), and evaluate the effectiveness of management strategies, actions and implementation.

The selection of relevant and practical (*i.e.*, measurable) indicators is one of the most Important components of the objectives-based management approach. The appropriate interpretation and use of indicators is important to their success. For example, indicators used in isolation may present a different picture to when they are used in conjunction with other indicators. The initial objectives-based management framework will focus on a limited set of relatively simple indicators, with the inclusion of additional and more complex indicators as the process develops over time. The broader use of these indicators in monitoring the overall performance of the Plan is described in the section, **PLAN IMPLEMENTATION, MONITORING AND REVIEW**.

Sample indicators

The table below provides some sample outcome indicators that could be used for measuring progress on human use objectives.

Human Use Element	Plan Objective	Outcome Indicators
Community well-being	To contribute to the long-term social and cultural well-being of communities in Nova Scotia	- Provincial employment levels per sector (no. of people) - Age structure of community in communities (years) - State of satisfaction - Existing infrastructure/required infrastructure by type (ratio) - Perceived security level
Economic well-being	To contribute to wealth generation through activities related to the ocean system and distribution according to societal objectives	- Annual contribution of ocean sectors to provincial GDP ($/annum; % GDP) - Genuine Progress Index - Intrinsic value of protected species and MPAs - Income from economic activities ($/activity)
Industrial capacity and assets	To support commercial activity and non-commercial uses within the bounds of resource capacity, while incorporating a culture of resource stewardship	- Fishing fleet capacity/TAC or quota (ratio) - Cumulative production vs reserves (oil and gas; aggregates) (units/annum) - Sectoral footprints (area)
Integrated management process	To develop institutional arrangements and capacities, and appropriate management strategies and actions that contribute to integrated ocean management	- Audited budgetary expenditure for operating formal collaborative planning structures ($/annum) - Number of personnel hours allocated by collaborating parties for Plan activities (hours/annum) - Checklist of required documents that apply to the Plan - Number of officially reported incidences of non-compliance per annum (no.) - Number and budget of research projects related to the Plan

Decision Rules for Integrating Objectives

The Plan recognizes that the pursuit and implementation of the ecosystem and human use objectives will lead to intersections and potential for conflict among multiple objectives. Addressing these interactions will require choices to be made and decisions to be taken. The common point between the ecosystem and human use objectives is that human use of marine space and resources places pressures on the ecosystem. Conversely, ecosystem objectives can place limits on the pursuit of human use objectives and targets. A set of decision rules is required to assist in the implementation and integration of the management objectives.

General rules for integrating ecosystem and human use objectives include the following:

- Harvesting of living resources must be within the carrying capacity of the harvested resources, as well as other ecosystem elements that may be unintentionally impacted, and must not significantly alter the structure and functioning of the ecosystem.
- Extraction and use of non-living resources must be undertaken in an environmentally sound manner so that ecosystem structure and functions are not significantly altered and the ecological footprint is minimized.
- Any contaminant input to the environment must be within the assimilative capacity of the ocean as measured by the best available environmental quality indicators.
- In cases where agreed ecosystem and human use objectives are incompatible, management decision-making must first consider the limits required to meet the affected ecosystem objective(s).
    - Human use of the resource and supporting ecosystem will be prohibited, limited and/or controlled so as to meet the specified parameters for the ecosystem objectives.
    - In cases where multiple ocean use may exceed the ecosystem limits, preference will be given to the use(s) that are most compatible with the affected ecosystem objectives.

The rules and guidance for integrating objectives will be refined and expanded as the objectives-based management framework develops over time.

FEEDBACK

Do you agree with the use of decision rules for integrating ecosystem and human use objectives? Are there changes to the statements presented here, or additional statements that could be included?

INTEGRATED MANAGEMENT TOOLS AND APPROACHES

Integrated ocean management requires the balanced use of a range of management tools and approaches. Key tools for implementing the Plan include the following:

- objectives-based management
- area-based management
- regulatory tools
- non-regulatory tools
- compliance promotion and enforcement
- communications and information sharing

OBJECTIVES-BASED MANAGEMENT

The core of the Plan is the objectives-based management framework that sets out a hierarchy of ecosystem and human use objectives to achieve agreed-upon outcomes for the planning area. This framework is supported by a series of indicators for monitoring progress, guidelines for integrating multiple ecosystem and human use objectives, and a set of associated management strategies and actions designed to achieve the intent of the objectives. These components of the Plan are described in the sections entitled, **OBJECTIVES-BASED MANAGEMENT FRAMEWORK** and **MANAGEMENT STRATEGIES AND ACTIONS**.

AREA-BASED MANAGEMENT

Within the construct of objectives-based management, the Plan employs an area-based approach to integrated ocean management. The area-based approach is supported by the national *Policy and Operational Framework for Integrated Management* through the future establishment of Large Ocean Management Areas (LOMAs) in all Canadian waters. The current planning area is focused on the Eastern Scotian Shelf (see **THE PLANNING AREA**), although broader regional management requirements and considerations are included within the scope of the Plan.

An area-based approach enables planning and management of multiple ocean use and ecosystem conservation at the most appropriate and practical spatial scales, ranging from regional to site-specific in nature. The development of a spatial-temporal planning and assessment framework is also possible, whereby overlaps of activities could be considered both in terms of space and timing. For example, such a tool would be useful in planning mitigation measures for multiple activities, or to avoid conflicts between different activities planned for the same period of time.

Spatial Planning and Zoning

When used in the broader context of integrated ocean management, spatial planning and zoning can provide a useful management tool to address spatial and temporal interactions among ocean users and ecosystem impacts. Spatial planning and zoning may be implemented for many purposes, including the following:

- to define protection, conservation and management measures for specific ecosystems, resources and marine areas
- to address spatial or temporal interactions among human use activities

- to provide greater clarity in terms of permitted activities, use thresholds and monitoring requirements for ocean users and regulators
- to identify and manage areas of significance or importance for ocean use

Spatial planning and zoning can be used to determine, manage, and monitor types and/or degrees of use for spatially defined areas. Although zoning is often used to specify permitted activities, a more comprehensive approach uses objectives, performance criteria, targets and indicators to manage various impacts of use (*e.g.*, water quality, density and overlap of use, benthic disturbance) at selected management scales (*e.g.*, regional to site-specific). Through this approach, specific uses and developments can be reviewed at the appropriate management scale to identify required modifications and mitigation measures to satisfy regulatory and management criteria for approval.

Spatial planning and zoning is an accepted and recommended practice for marine management around the world and within Canada. However, uncoordinated sectoral approaches to zoning can lead to conflicts between different types of ocean uses. It can also contribute directly to ecosystem impacts, as cumulative effects may occur from uncoordinated activities.

The current set of uncoordinated sector-based zones does not provide an adequate approach to consider and address management requirements for all parts of the planning area. As well, simply adopting various existing zones, or developing new, unconnected management zones will not address many existing issues nor constitute effective ocean planning.

The Plan will support spatial planning and zoning that is considered in the context of agreed-upon management objectives and applied in a coordinated and careful manner. When considering spatial planning and zoning as a tool, the Plan will need to:

(1) recognize, incorporate and adopt existing management and planning zones; and
(2) identify, design and implement new zones for the purposes of ecosystem-based management or to address specific objectives, interactions or impacts.

The coordination of ocean uses and management systems through zoning and other spatial planning tools can assist in finding appropriate balances among the ecosystem and human use objectives for the planning area. The effective application of spatial planning and zoning requires the recognition of the temporal and spatial scales at which ecological systems function, with the realistic understanding that management zones and lines are limited by the dynamic nature of the marine environment.

FEEDBACK

Do you agree with the inclusion of spatial planning and zoning in the toolkit for the Plan?

Marine zoning on the Eastern Scotian Shelf: a sector-based patchwork

The Eastern Scotian Shelf contains a diverse range of management and planning zones for various sector activities, services and purposes. The zones tend to have meaning only for one sector. For example, the zones delineated for fisheries management purposes are not the same as those delineated for search and rescue (although both are administered by DFO). Existing zones include the following:

Fisheries management, conservation and licensing zones, including Northwest Atlantic Fisheries Organization (NAFO) divisions, and open and closed areas/seasons for species, gear type and vessel class, and areas closed for human health reasons (such as shellfish harvesting closures).

Oil and gas management zones, including exploration license blocks, environmental assessment areas (*e.g.*, class, generic and strategic environmental assessment areas), and safety zones around infrastructure.

Ocean dumping and disposal zones, including dumping permit areas and charted locations of munitions.

Marine transportation management and monitoring zones, including vessel traffic service (VTS) zones and separation schemes, port/harbour authority anchorage areas, ballast water exchange zones, and Search and Rescue responsibility zones.

Aquaculture lease areas, including portions of harbours, bays and other marine areas designated for aquaculture.

Military operational areas, including offshore naval exercise and test areas, and surveillance and patrol areas of responsibility.

Protected areas, including Marine Protected Areas (MPAs) under the *Oceans Act*, and various wildlife conservation areas under federal and provincial legislation.

Scientific research and monitoring zones, including fisheries survey and sampling strata, and zonal and site monitoring areas.

Informal zones established by common practice and use, such as preferred fishing grounds, submarine cable protection zones, or commonly used vessel transit lanes.

Other special management areas including private water lots and underwater wreck sites.

Geospatial Risk Assessment and Decision Support

The area-based approach supports the employment of spatial-temporal risk assessment and decision support tools to address activity interactions and impacts in terms of space and timing. These tools consider the likelihood of activities interacting with one another, or with valued ecosystem elements, and assist in determining the risk and magnitude of resulting impacts (*i.e.*, hazards and vulnerabilities). Geospatial risk assessment provides a standardized approach to conflict and impact avoidance and mitigation at the planning stage. This includes explicit criteria for defining the nature of risks and resulting impacts (*i.e.*, minor to significant; acceptable to unacceptable).

A variety of risk assessment methodologies and approaches are currently in use. In most cases, these tools are designed for specific functions, such as oil spill trajectory analysis or marine search and rescue planning. The Plan supports the development of risk assessment and decision support tools that can be used to address issues of multiple ocean use and associated activity interactions and ecosystem impacts. Of particular importance is the development of methodologies for identifying regional and local scale cumulative effects from multiple activities over space and time.

Ocean use mapping: a tool for risk assessment and decision making

The ESSIM Planning Office is undertaking a major project to develop a risk assessment and decision support tool for multiple use management on the Scotian Shelf. The current phase is focused on the completion of a GIS-based atlas showing the location and extent of major human activities and related management zones and practices in the region. Areas of importance for various ocean uses will be characterized. Ecological information will also be incorporated in a subsequent phase. This atlas and its underlying database will form a key component of a spatial-temporal framework to assess risks associated with a range of human activities, including ecosystem impacts and sector activity interactions. The project is designed to support regional ocean planning, management and decision making, including the Eastern Scotian Shelf planning process and the Gully Marine Protected Area. As such, the development of prototype analysis will focus on priority management needs in the region.

The completion of this atlas and the subsequent geospatial risk assessment tool has been identified in the Plan as a key activity in support of multiple ocean use and marine ecosystem management.

Ecologically and Biologically Significant Areas

Within the broader context of integrated and ecosystem-based ocean management, the identification of ecologically and biologically significant areas (EBSAs) can provide a flexible tool for multiple use management and conservation planning. There are several purposes for selecting areas of biological and ecological significance, including:

- to identify areas that may require special management measures to conserve natural features or functions
- the identify areas requiring special consideration in environmental assessments of human activities
- to support the development of the ecosystem objectives framework by providing the spatial context for indicators and targets
- to assist in the assessment of candidate sites for Marine Protected Areas (*Oceans Act*) or other types of protective status

What are EBSAs?

Ecologically and biologically significant areas are those that have valued ecological or biological attributes. Valued attributes contribute to the functioning and sustainability of the ecosystem, the maintenance and conservation of genetic, species and population and/or habitat diversity, and/or other vital ecological functions. ***These attributes are present to a higher degree than most or all other areas in the region.***

A science-based identification and evaluation framework for EBSAs is being developed by DFO in tandem with the ecosystem objectives framework. The key component of this national framework is a comprehensive set of criteria for identifying and defining EBSAs. The completion of the EBSA framework has been included as a management strategy for the Plan. In addition to the national framework, ongoing regional work on EBSA criteria and analysis will be considered through the Plan.[14]

The management of activities and impacts in EBSAs can be undertaken through a variety of management tools, including:

- sector-specific controls (*e.g.*, fisheries closures or restrictions; oil and gas exclusion policies)
- expanded environmental assessment requirements for mitigation and monitoring
- protected area designations
- industry-based codes of best practice

The Plan recognizes that the use of EBSAs represents a specific area-based management tool that can be used to achieve specific conservation outcomes. However, it is not appropriate or effective to focus conservation efforts solely on specific areas defined as EBSAs. Rather, a regional ecosystem-wide approach is required, based on a comprehensive set of ecosystem objectives for the planning area.

[14] See, for example, Oceans and Coastal Management Report 2004-04, *Review of Criteria for Selecting Ecologically Significant Areas of the Scotian Shelf and Slope: A Discussion Paper.*

What about geological areas of significance?

It is understood that there is an important relationship between geology and biology in the marine environment. The selection and management of EBSAs should be complemented by a similar process for identifying geologically significant areas. The Gully and Sable Island provide excellent examples in the planning area, but many more underwater features should be considered as well. This will require a collaborative effort involving NRCan, DFO and various industry and non-governmental groups.

Ecosystem Classification and Modeling

Ecosystem and habitat classification systems and models are important tools for ecosystem-based management, risk assessment and decision support. Two ongoing initiatives are of particular relevance to the Plan.

Benthic classification: In 2001, DFO and NRCan initiated a collaborative Regional Advisory Process (RAP) to provide guidance on the management on benthic impacts in the Maritimes Region. The three phases of this process included: (1) investigation of potential benthic classification schemes; (2) classification of benthic habitats for the Scotian Shelf; and (3) development of guidelines and best practices to ensure their conservation. To address the first phase, a RAP meeting was held June 25-26, 2001[15] at which various approaches to classification were discussed. The second phase was initiated with a RAP meeting held January 6-8, 2004[16] to review the proposed benthic classification scheme for the region. This classification scheme describes and predicts benthic community types in terms of the oceanographic variables that influence physiological processes of organisms (*e.g.*, temperature, salinity, food supply) and the likelihood of physical disturbance (*e.g.*, water column and sediment movement). The third phase is expected to bring together information on benthic habitat types, potential impacts, and a risk assessment framework to provide guidance on management options.

Oceanographic modeling: Scientists in DFO's Coastal Oceanography group are developing a high resolution circulation modeling system for the eastern seaboard of Canada. The model will include benthic boundary layer and sediment transport modules. The system is designed to be flexible, in order to meet potential demands of users and various ocean management needs. For example, the system will enable the development of specialized modeling applications to support management and understanding of the Gully Marine Protected Area. This system will

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[15] J. Arbour (chair) and V. Kostylev (ed.). 2002. *Proceedings of a Benthic Habitat Classification Workshop Meeting of the Maritimes Regional Advisory Process. A Framework for the Conservation of Benthic Communities of the Scotia-Fundy Area of the Maritimes Region*. CSAS Proceedings Series 2002/023.

[16] J. Arbour (chair) and R. St-Laurent (compiler). 2004. *Proceedings of a Benthic Habitat Classification Workshop Meeting of the Maritimes Regional Advisory Process. Benthic Classification and Usage Guidelines of the Scotia-Fundy Area of the Maritimes Region*. CSAS Proceedings Series 2004/004.

also be used to address broader management issues in the region, such as ballast water exchange and marine pollutants.

REGULATORY TOOLS

Although the Plan is not regulatory in nature, implementation of the management strategies and actions contained in it may require the use of various regulatory-based tools. Consistent with the collaborative planning approach advocated for integrated management, government departments and agencies may use their regulatory authorities and powers to fulfil or contribute to the objectives, management strategies and actions contained in the Plan. These regulatory tools include the following:

- sector-specific control measures as contained in legislation and supporting regulations
- sector-specific plans, authorizations, licences or permits issued pursuant to legislation and supporting regulations
- protected area designations and controls
- requirements under federal or provincial environmental assessment processes

The Plan and supporting collaborative planning process are designed to ensure that sector-specific regulatory tools are coordinated within the broader multiple use context.

NON-REGULATORY TOOLS

The Plan may be implemented through a variety of non-regulatory management tools and approaches. These instruments include the following:

- government statements, guidelines and/or protocols for best practice
- industry-based statements and/or codes of best practice
- statements of intent or commitment

COMPLIANCE PROMOTION AND ENFORCEMENT

The preferred means of ensuring adherence to the Plan is through the use of compliance promotion approaches. Signatories to the Plan are expected to undertake compliance promotion activities within their communities of interest and constituencies.

Compliance promotion can be achieved through a variety means, including the following:

- information sharing and communications (*i.e.*, awareness raising)
- stewardship promotion
- incentives programs
- effective participation in the collaborative planning process and development of management objectives, strategies and actions

Enforcement of specific measures contained in the Plan may be undertaken by relevant regulatory authorities under their respective legislation and regulations.

COMMUNICATIONS AND INFORMATION SHARING

The Plan supports the use of a variety of communications and information sharing tools. The primary tool is the Collaborative Planning Model and its various mechanisms for multi-sectoral and intergovernmental dialogue and information sharing, such as the Stakeholder Roundtable and annual ESSIM Forum workshops (see **COLLABORATIVE PLANNING MODEL**).
The ESSIM Planning Office will also support ongoing communications with all interested and affected groups through the following tools:

- regular e-newsletters to the ESSIM Forum membership
- the ESSIM Initiative website, including the online discussion forum (*i.e.*, moderated discussions)
- planning reports and issue/topical papers
- face-to-face dialogue through meetings and workshops

The Plan includes several management actions for improving communications, ocean awareness and information sharing. These include the following:

- development of a web-based information portal for the ESSIM Initiative containing easy access to relevant information on ocean-related activities in the region
- development of a common source of geospatial, scientific and other types of information
- a review of issues related to information and data sharing and development of recommendations for improvement

MANAGEMENT STRATEGIES AND ACTIONS

The purpose of this section of the Plan is to provide a set of management strategies and associated actions for integrated management in the planning area. The management strategies, actions and commitments are designed to contribute both directly and indirectly to the broader ecosystem and human use objectives for the Plan. For practical purposes, this section is organized according to the broad thematic areas of: (i) multiple human use; (ii) marine ecosystem management and conservation; and (iii) collaborative planning and management coordination. It is recognized that many management issues, needs and actions transcend these thematic areas. However, they do provide a useful way to organize and articulate various management strategies and actions in relation to each other.

Within each thematic area, management strategies are presented, along with more specific supporting actions. In each case, lead and supporting organizations and affected use sectors are identified. The following categories are used to identify sectors:

- Fisheries
- Conservation Groups
- Transportation
- Telecommunications
- First Nations
- Other Ocean Industries[17]
- Oil and Gas
- Community Groups
- Academic and Private Sector Research
- Tourism
- Regulators (Federal, Provincial and Municipal)
- Military

Anticipated timelines for completion and implementation of each action item are provided according to the following parameters:

Short-term: completion/implementation anticipated within 1-2 year period
Medium-term: completion/implementation anticipated within 2-5 year period
Long-term: completion/implementation anticipated over 5-10+ year period

The status of each management action is also described according to the following parameters:

Future: action is not yet underway
Initiated: action has been initiated and is ongoing
Completed/implemented: action is completed or implementation is underway

Finally, direct linkages to key ecosystem and/or human use elements contained in the Plan's objectives framework are identified, where appropriate. These are as follows:

Ecosystem elements	***Human use elements***
- Communities	- Community well-being
- Species	- Economic well-being
- Productivity	- Industrial capacity and assets
- Habitat	- Integrated management process

In many cases, management actions respond to a number of ecosystem and human use elements and objectives.

[17] This category includes less common or future industries in the region, such as renewable energy or offshore minerals development.

The diagram below illustrates the format of the management strategies and actions.

ACTION	LEAD/SUPPORTING ORGANIZATIONS	AFFECTED SECTORS	TIMELINE/ STATUS	LINK TO ECOSYSTEM/ HUMAN USE ELEMENTS
A1 ACTION				
A2 ACTION				

MULTIPLE HUMAN USE

***S1** Develop and implement an objectives-based framework for sustainable human use*				
ACTION	LEAD/ SUPPORTING ORGANIZATIONS	AFFECTED SECTORS	TIMELINE/ STATUS	LINK TO ECOSYSTEM/ HUMAN USE ELEMENTS
A1 Develop comprehensive set of objectives and indicators for agreed human use elements	**DFO (Oceans)/** All Relevant Regulators & Sectors	All	Short/ Initiated	All human use elements
A2 Incorporate and reflect human use objectives and indicators in all ocean sector-based planning and management processes	**All Relevant Regulators & Sectors**	All	Medium-Long/ Future	All human use elements
***S2** Identify, manage and avoid spatial and/or temporal conflicts involving multiple users*				
ACTION	LEAD/ SUPPORTING ORGANIZATIONS	AFFECTED SECTORS	TIMELINE/ STATUS	LINK TO ECOSYSTEM/ HUMAN USE ELEMENTS
A1 Develop GIS-based ocean use atlas as a tool for planning, assessment and decision-making	**DFO (Oceans)/** All Relevant Regulators & Sectors	All	Short/ Initiated	All ecosystem and human use elements

A1.1 Identify and characterize areas of high intensity, moderate and low human use, and actual and potential multiple use conflicts, including seasonal patterns			Short/ Initiated	
A2 Develop spatial risk assessment tool for multiple use planning, management and decision making	**DFO (Oceans)/** All Relevant Regulators & Sectors	All	Short-Medium/ Future	All ecosystem and human use elements
A3 Develop criteria and guiding principles to support use analysis and decision making A3.1 Use criteria to identify significant and important ocean use areas	**DFO (Oceans)/** All Relevant Regulators & Sectors	All	Short-Medium/ Future Short-Medium/ Future	All ecosystem and human use elements
A4 Assess spatial/temporal management and zoning measures in support of the Plan A4.1 Evaluate effectiveness of current spatial management and zoning measures A4.2 Provide recommendations for improved use and coordination of spatial management and zoning measures	**DFO (Oceans)/** All Relevant Regulators & Sectors	All	Short-Medium/ Initiated Short-Medium/ Initiated Medium/ Future	All ecosystem and human use elements
A5 Develop procedures to improve submarine telecommunications cable planning in relation to impacts on commercial fisheries	**DFO (Oceans/ Fisheries Mgt), IC/** Fisheries, Telecom	Fisheries, Telecom	Short-Medium/ Initiated	Industrial capacity & assets, economic well-being, integrated management process

A6 Evaluate and provide recommendations for regulators and industry to address interactions between commercial fishing and oil/gas (*e.g.*, power cable and pipeline routing; exploration operations)	**DFO (Oceans/ Fisheries Mgt) , CNSOPB, NRCan, NEB, NS Energy/** Fisheries, Oil & Gas	Fisheries, Oil & Gas	Short-Medium/ Initiated	Industrial capacity & assets, economic well-being, integrated management process
A7 Evaluate and provide recommendations for regulators and industry to address interactions between commercial shipping and other ocean sectors	**DFO (Oceans/CCG), TC/** All Relevant Regulators & Sectors	All	Short-Medium/ Initiated	Industrial capacity & assets, economic well-being, integrated management process
A8 Evaluate and provide recommendations for regulators and industry to address interactions involving other ocean sector activities, as required	**DFO (Oceans)/** All Relevant Regulators & Sectors	All	Short-Medium/ Future	Industrial capacity & assets, economic well-being, integrated management process

MARINE ECOSYSTEM MANAGEMENT AND CONSERVATION

***S3** Develop and implement an objectives-based marine ecosystem management and conservation framework*				
ACTION	LEAD/ SUPPORTING ORGANIZATIONS	AFFECTED SECTORS	TIMELINE/ STATUS	LINK TO ECOSYSTEM/ HUMAN USE ELEMENTS
A1 Develop comprehensive set of ecosystem objectives for biodiversity, productivity and habitat conservation A1.1 Undertake regional ecosystem assessment in support of objectives, indicators and targets A1.2 Collect information for selected ecosystem elements to develop objectives, including	**DFO (Science/ Oceans)/** All Relevant Regulators & Sectors	All	Short-Medium/ Initiated Short/ Initiated Short-Medium/ Initiated	All ecosystem elements

indicators, reference points/targets, and identify research needs				
A2 Develop and/or enhance regional scientific monitoring and research programs to measure progress on implementing ecosystem objectives A2.1 Undertake regular state of the ecosystem reporting A2.2 Develop regional process to address identified science gaps and research needs through a coordinated and strategic approach	**DFO (Science/ Oceans)**/ EC, NRCan, Academic & Private Research	All	Medium-Long/ Initiated Short-Medium/ Initiated Medium/ Future	All ecosystem elements
A3 Ensure that fishing plans incorporate ecosystem objectives A3.1 Evaluate fishing plans in relation to ecosystem objectives A3.2 Incorporate ecosystem objectives in fishing plans and related management tools	**DFO (Fisheries Mgt/Science/ Oceans)**/ Fisheries	Fisheries, Conservation Communities	Short-Medium/ Initiated Short/ Initiated Short-Medium/ Initiated	All ecosystem elements
A4 Ensure that all ocean sector-based plans and management processes incorporate relevant ecosystem objectives A4.1 Apply ecosystem objectives to oil and gas environmental assessments, and exploration and development planning A4.2 Apply ecosystem objectives to marine	**All Relevant Regulators & Sectors** **CNSOPB**/ DFO, EC, Oil & Gas **TC & DFO (CCG)**/ EC, Transport	All	Medium/ Future Medium/ Future Medium/ Future	All ecosystem elements

transportation management and regulatory processes A4.3 Apply ecosystem objectives to all marine operations and activities, including scientific research, government/naval operations, and infrastructure development (*e.g.*, submarine cables).	**All Relevant Regulators & Sectors**		Medium/ Future	
S4 *Identify ecologically, biologically and geologically significant areas for use in planning, assessment and decision making*				
ACTION	LEAD/ SUPPORTING ORGANIZATIONS	AFFECTED SECTORS	TIMELINE/ STATUS	LINK TO ECOSYSTEM/ HUMAN USE ELEMENTS
A1 Finalize national and regional criteria for identification of ecologically and biologically significant areas	**DFO (Science/ Oceans), EC**	All	Short/ Initiated	Communities, habitat, species
A2 Identify ecologically and biologically significant areas, and make recommendations on most appropriate management and protection options	**DFO (Oceans/ Science), EC/** All Relevant Regulators & Sectors	All	Short-Medium/ Initiated	Communities, habitat, species
A3 Develop national and regional criteria for identification of geologically significant areas	**NRCan/** All Relevant Regulators & Sectors	All	Medium/ Future	Habitat
A4 Incorporate management and protection measures for ecologically, biologically and geologically significant areas in all sector-based management processes, such as environmental assessments and fishing plans	**All Relevant Regulators & Sectors**	All	Short-Medium/ Initiated	Communities, habitat, species

***S5** Develop and implement benthic ecosystem and habitat protection strategies*				
ACTION	LEAD/ SUPPORTING ORGANIZATIONS	AFFECTED SECTORS	TIMELINE/ STATUS	LINK TO ECOSYSTEM/ HUMAN USE ELEMENTS
A1 Develop benthic ecosystem/habitat characterization framework	**DFO (Science/ Oceans), NRCan (GSC Atlantic)**	All	Short/ Initiated	Habitat, communities
A2 Identify and assess human activities and impacts according to benthic characterization model	**DFO (Science/ Oceans), NRCan (GSC Atlantic)**/ All Relevant Regulators & Sectors	All	Short/ Future	Communities, habitat, species
A3 Develop and implement a regional coral conservation plan	**DFO (Oceans/ Science/Fisheries Mgt)**/ All Relevant Regulators & Sectors	All	Short/ Initiated	Communities, habitat, species
A4 Develop and implement a regional benthic ecosystem/habitat conservation plan A4.1 Incorporate benthic protection measures in relevant ocean-related plans, including fishing plans, oil and gas exploration and development plans, and scientific research plans	**DFO (Oceans/ Science)**/ All Relevant Regulators & Sectors	All	Medium-Long/ Future Medium/ Initiated	Communities, habitat, species

S6 *Develop and implement a regional marine protected areas system plan*

ACTION	LEAD/ SUPPORTING ORGANIZATIONS	AFFECTED SECTORS	TIMELINE/ STATUS	LINK TO ECOSYSTEM/ HUMAN USE ELEMENTS
A1 Develop regional coordination mechanism for federal marine protected area planning, including powers under the *Oceans Act* and federal wildlife legislation	**DFO (Oceans), EC (CWS & Parks)**	All	Short-Long/ Initiated	All ecosystem elements
A2 Complete management plan and related measures for the Gully MPA	**DFO (Oceans)**/ Gully MPA Advisory Committee	All	Short/ Initiated	All ecosystem elements
A3 Develop *Oceans Act* Marine Protected Area system plan and initiate candidate site assessments	**DFO (Oceans)**	All	Short-Medium/ Future	All ecosystem elements

S7 *Develop and implement recovery strategies for aquatic species at risk*

ACTION	LEAD/ SUPPORTING ORGANIZATIONS	AFFECTED SECTORS	TIMELINE/ STATUS	LINK TO ECOSYSTEM/ HUMAN USE ELEMENTS
A1 Develop and implement recovery strategies, plans and measures for aquatic species at risk, as specified under the *Species at Risk Act*.	**DFO (Science/ Fisheries Mgt/ Oceans), EC**/ All Relevant Regulators & Sectors	All	Short-Medium/ Initiated	Species
A1.1 Identify and map critical habitats for affected species at risk			Short-Medium/ Initiated	
A1.2 Evaluate practical applications of regional, ecosystem-based approaches to management of species at risk			Medium/ Future	

A2 Incorporate species at risk protection measures in relevant ocean-related plans, including fishing plans, oil and gas exploration and development planning, and scientific research plans	**All Relevant Regulators & Sectors**	All	Short-Medium/ Initiated	Species
***S8** Develop and implement prevention strategies for ship-source impacts on the marine environment*				
ACTION	LEAD/ SUPPORTING ORGANIZATIONS	AFFECTED SECTORS	TIMELINE/ STATUS	LINK TO ECOSYSTEM/ HUMAN USE ELEMENTS
A1 Complete a comprehensive database for analysis and mapping of regional commercial shipping patterns, including an assessment of associated management issues	**DFO (Oceans/ CCG), TC, EC** / Academic & Private Research, Transport	All	Short-Medium/ Initiated	Habitat, species, industrial capacity & assets
A2 Finalize and implement appropriate ballast water management measures, including low-risk alternative ballast water exchange zones	**TC/** DFO (Science/ CCG/Oceans), EC, Transport	All	Short/ Initiated	Communities, productivity, species, community well-being, economic well-being, industrial capacity & assets
A3 Promote development of onboard ballast water treatment options	**TC/** DFO (Science), Transport, Academic & Private Research	All	Medium-Long/ Initiated	Communities, productivity, species, community well-being, economic well-being, industrial capacity & assets
A4 Identify and implement appropriate measures for reducing regional vessel-whale interactions	**DFO (Oceans/ CCG), TC/** Academic & Private Research, Conservation, Transport	Transport, Conservation	Short-Medium/ Initiated	Species, industrial capacity & assets

A5 Coordinate surveillance, reporting, response and enforcement of ship-source oil pollution	**DFO (CCG/ Fisheries Mgt), TC, EC, DND/** Transport	All	Short-Medium/ Initiated	Habitat, species, industrial capacity & assets
A6 Assess potential areas suitable for designation under relevant International Maritime Organization (IMO) protection tools (*e.g.*, Particularly Sensitive Sea Areas)	**TC, EC, DFO (CCG/ Oceans/Science)/** Transport, Conservation, Academic & Private Research	All	Short-Medium/ Initiated	Habitat, species, industrial capacity & assets
***S9** Develop and implement strategies to minimize impacts from sources of acoustic energy in the marine environment*				
ACTION	LEAD/ SUPPORTING ORGANIZATIONS	AFFECTED SECTORS	TIMELINE/ STATUS	LINK TO ECOSYSTEM/ HUMAN USE ELEMENTS
A1 Develop and implement a comprehensive set of mitigation measures for all types of seismic operations A1.1 Incorporate national standards and procedures for seismic operations in applicable management and regulatory processes A1.2 Complete protocol for seismic operations in relation to the Gully MPA	**DFO (Science/ Oceans), NRCan, CNSOPB, NS Energy/** EC, Oil & Gas, Fisheries, Academic & Private Research, Conservation **DFO (Oceans), CNSOPB**	Oil & Gas, Fisheries, Communities, Conservation	Short-Medium/ Initiated Short/ Initiated Short/ Initiated	Habitat, species, industrial capacity & assets
A2 Review and provide recommendation for mitigation measures for other sound sources, including naval sonar operations (domestic and foreign), exploratory/production drilling, and scientific research	**DND, DFO (Science/ Oceans), NRCan, CNSOPB**	All	Short-Medium/ Future	Habitat, species, industrial capacity & assets

A3 Continue biological effects and mitigation research for sensitive ecosystem elements, including fish, invertebrates, turtles and marine mammals	**DFO (Science/ Oceans), DND, NRCan, CNSOPB/** Academic & Private Research, Conservation, Fisheries	All	Short-Medium/ Initiated	Habitat, species, industrial capacity & assets
***S10** Develop process for assessing cumulative environmental impacts from multiple activities at appropriate scales*				
ACTION	LEAD/ SUPPORTING ORGANIZATIONS	AFFECTED SECTORS	TIMELINE/ STATUS	LINK TO ECOSYSTEM/ HUMAN USE ELEMENTS
A1 Conduct review to determine the requirement for an assessment of cumulative impacts from multiple activities at a regional scale A1.1 Develop methodologies and identify appropriate indicators for assessing cumulative impacts from multiple activities	**DFO (Oceans/ Science)/** All Relevant Regulators & Sectors	All	Medium/ Future Medium/ Future	All ecosystem elements, industrial capacity & assets, integrated management process
A2 Conduct review to determine the requirement for assigning a regional oversight function to an appropriate government organization for monitoring cumulative ecosystem and human use impacts	**All Relevant Regulators & Sectors**	All	Medium/ Future	All ecosystem elements, industrial capacity & assets, integrated management process
A3 Develop a high resolution ocean circulation modeling system to support regional environmental assessments, monitoring and decision making	**DFO (Science)**	All	Short-Medium/ Future	All ecosystem elements

COLLABORATIVE PLANNING AND MANAGEMENT COORDINATION

***S11** Build long-term collaborative planning process for the Integrated Ocean Management Plan*

ACTION	LEAD/ SUPPORTING ORGANIZATIONS	AFFECTED SECTORS	TIMELINE/ STATUS	LINK TO ECOSYSTEM/ HUMAN USE ELEMENTS
A1 Establish Collaborative Planning Model for ESSIM Initiative	**DFO (Oceans)/** All Relevant Regulators & Sectors	All	Short/ Initiated	Integrated management process
A1.1 Form Stakeholder Roundtable to support multi-stakeholder planning and advice			Short/ Initiated	
A1.2 Form senior-level Regional Committee on Ocean Management to support intergovernmental coordination and participation			Short/ Initiated	
A1.3 Develop and apply principles of consensus-based planning, including agreed process for conflict resolution			Short/ Initiated	
A2 Develop short-term action planning process for implementation of the multi-year Integrated Ocean Management Plan	**DFO (Oceans)/** All Relevant Regulators & Sectors	All	Short/ Future	Integrated management process

***S12** Develop frameworks for performance monitoring, reporting, compliance promotion and accountability for the Integrated Ocean Management Plan*

ACTION	LEAD/ SUPPORTING ORGANIZATIONS	AFFECTED SECTORS	TIMELINE/ STATUS	LINK TO ECOSYSTEM/ HUMAN USE ELEMENTS
A1 Develop performance monitoring and reporting	**DFO (Oceans)/**	All	Short-	Integrated

process for short-term action plans and the multi-year Integrated Ocean Management Plan	All Relevant Regulators & Sectors		Medium/ Future	management process
A2 Incorporate the integrated ocean management plan in departmental planning, management and reporting processes A2.1 Incorporate Plan objectives and management strategies/actions in departmental strategic and business plans A2.2 Reflect Plan objectives and management strategies/actions in departmental performance reporting processes	**All Relevant Regulators**	All	Short-Medium/ Future Short-Medium/ Future Short-Medium/ Future	Integrated management process
A3 Incorporate the integrated management plan in industry and sector plans A3.1 Support development of industry-based codes of practice consistent with the integrated ocean management plan A3.2 Support development of recognition program for industry and community-based stewardship, best practices and performance in relation to the Integrated Ocean Management Plan	**All Relevant Sectors & Regulators**	All	Medium/ Future Medium/ Future Medium/ Future	Integrated management process, industrial capacity & assets
A4 Develop a set of decision rules for the integration of ecosystem and human use objectives	**All Relevant Sectors & Regulators**	All	Short-Medium/ Future	All ecosystem and human use elements

***S13** Develop mechanisms for improved ocean awareness and information sharing*				
ACTION	LEAD/ SUPPORTING ORGANIZATION	AFFECTED SECTORS	TIMELINE/ STATUS	LINK TO ECOSYSTEM/ HUMAN USE ELEMENTS
A1 Design web-based information portal for marine initiatives, activities and consultation processes related to the integrated ocean management plan	**DFO (Oceans)/** All Relevant Regulators & Sectors	All	Medium/ Initiated	Integrated management process
A2 Support preparation of public reports on ocean management topics of interest	**All Relevant Regulators & Sectors**	All	Short-Medium/ Initiated	Integrated management process
A3 Improve access to information by developing common sources of geospatial, scientific and management-related data and information A3.1 Examine barriers to information and data sharing and make recommendations for improvement	**All Relevant Regulators & Sectors**	All	Medium/ Future Medium/ Future	Integrated management process
***S14** Increase opportunities for intergovernmental and interdepartmental cooperation for cross-cutting regional ocean management-related issues*				
ACTION	LEAD/ SUPPORTING ORGANIZATIONS	AFFECTED SECTORS	TIMELINE/ STATUS	LINK TO ECOSYSTEM/ HUMAN USE ELEMENTS
A1 Develop long-term management and governance strategy for Sable Island, addressing human presence and infrastructure	**EC, DFO (CCG), Province of Nova Scotia/** All Relevant Regulators & Sectors	All	Short-Medium/ Initiated	Integrated management process, habitat
A2 Develop intergovernmental coordination mechanisms to	**EC, DFO, NRCan, Province of Nova Scotia/**	All	Short-Medium/ Initiated	All ecosystem and human use

address ocean management issues related to climate change	Academia & Private Research, Conservation, Community Sectors			elements
A3 Enhance interdepartmental coordination for maritime surveillance, enforcement and security operations and information sharing, to support regional ocean management	**Eastern Canada Interdepartmental Marine Operations Committee**	All	Short-Medium/ Initiated	Integrated management process, community well-being
A4 Support initiatives for improving regulatory processes involving multiple jurisdictions (*i.e.*, smart regulation)	**All Relevant Regulators**	All	Short-Medium/ Initiated	Integrated management process
A5 Support interdepartmental coordination for strategic planning and funding to address priority ocean management needs	**All Relevant Regulators**	All	Short-Medium/ Future	Integrated management process

The management strategies, actions and commitments presented in the Plan will be elaborated through the action planning process. It is anticipated that the set of strategies and actions will be adapted over time to reflect changes in management needs, priorities and knowledge. Similarly, the management strategies and actions will be more closely linked to the Plan's ecosystem and human use elements and objectives as this framework develops over time.

FEEDBACK

Do the management strategies, actions and commitments contained in the Plan form a comprehensive, balanced and practical basis for moving forward with integrated management? Are there other management needs for which strategies should be developed and included? How best can the various strategies and actions be linked to the broader objectives of the Plan?

PLAN IMPLEMENTATION, MONITORING AND REVIEW

APPROVAL AND IMPLEMENTATION

The Plan provides a common basis for long-term commitment and action toward integrated, ecosystem-based and adaptive management of all marine activities in or affecting the planning area. The Plan is being developed through a collaborative and inclusive planning process. The intent of this process is to develop a Plan that is accepted by stakeholders, endorsed by legislative and regulatory authorities, and designated under the *Oceans Act* by the Minister of Fisheries and Oceans.

Government-Level Approval and Endorsement

At the governmental level, the Plan provides an intergovernmental mechanism to promote, support and implement policy, planning and management coordination. It is based on and supported by existing mandates, jurisdictions and responsibilities, and is consistent with federal and provincial policies and regulatory frameworks.

The collaborative planning structure for the ESSIM Initiative provides mechanisms for program-level and senior-level participation in development and implementation of the Plan (see **COLLABORATIVE PLANNING MODEL**). The functions and responsibilities of the program-level Federal-Provincial ESSIM Working Group and the executive-level Regional Committee on Ocean Management are designed to facilitate necessary departmental and intergovernmental reviews and approvals.

The review and approval process for the Plan must ensure that appropriate opportunities are provided for all government decision-making authorities to undertake necessary policy and regulatory analysis of its contents. Endorsement and approval of the Plan by a government decision-making authority is equivalent to a departmental policy commitment.

What happens if a government department cannot commit to something in the Plan?

In cases where a regulatory authority cannot commit to a specific part of the Plan (*e.g.*, management strategies or actions), further dialogue with affected parties will occur through appropriate mechanisms, such as those provided by the Collaborative Planning Model. Aspects of the Plan requiring significant policy or regulatory changes may be identified for further consideration and future action. In such cases, endorsement of the Plan by the affected authority will indicate a commitment to further consideration of the matter through appropriate processes. This approach allows the Plan to move forward in the absence of full agreement on all aspects, while ensuring that all concerns and limitations are identified for future deliberation and action.

Federal and provincial government departments may use both internal and external mechanisms to formalize, reflect and carry out their commitment to the Plan. Participating departments can incorporate the Plan and its relevant provisions in the departmental policy, program and planning documents, including:

- strategic and/or business plans
- sustainable development strategies
- strategic environmental assessments
- annual reports on plans and priorities
- annual financial planning documents and budgets, including commitments of staff and associated resources to the planning process and relevant management strategies and actions

Departments may also choose to formalize their commitment to the Plan through external mechanisms, including:

- letters of support or intent
- existing or new memoranda of understanding or agreement

Federal departments may use regional or national-level mechanisms in accordance with their organizational and line reporting structures.

The Plan will contain a listing of all participating departments for the public record. It is anticipated that this list will be comprised of the membership of the executive-level Regional Committee on Ocean Management.

Stakeholder-Level Acceptance

Acceptance of the Plan by affected ocean sectors, groups and individuals may occur through a variety of ways. The Collaborative Planning Model for the ESSIM Initiative is designed to provide several mechanisms for stakeholder participation in the planning process. The core Stakeholder Roundtable is essentially a standing working group comprised of identified and accepted ocean sector representatives to provide regular input on plan development and related planning activities. The functions and responsibilities of the Stakeholder Roundtable also require regular communications and two-way information sharing between its members and the broader communities of interest that they represent at the table.

In addition to the Stakeholder Roundtable, the ESSIM Planning Office is committed to regular dialogue, information sharing and meetings with all interested and affected communities of interest, either through the ESSIM Forum (a collective of interests) or through directed discussions and meetings with specific groups.

Endorsement of the Plan may occur through reference in appropriate organizational documents, including:

- activity, strategic or business plans
- performance reports
- activity applications, proposals and environmental assessments
- industry standards, guidelines or codes of conduct/best practice
- letters of support or intent

- terms of reference, mission or mandate documents

Sectors will also have opportunities to incorporate, reflect and implement the Plan through discussions and consultations with government departments on policy, regulatory and management matters affecting their activities.

Designation under the *Oceans Act*

The final approval for the Plan is provided by the Minister of Fisheries and Oceans pursuant to Sections 31 and 32 of the *Oceans Act*. The intent of this final approval is to provide national level commitment to the Plan under the ocean policy framework defined by *Canada's Oceans Strategy*, the national *Policy and Operational Framework for Integrated Management*, and the *Oceans Action Plan*. In this capacity, the final signature of the Minister of Fisheries and Oceans is on the behalf of all government authorities and stakeholders at the Governor-in-Council level of the Government of Canada.

The Collaborative Planning Model is designed to provide the necessary dialogue, reviews and approvals at all levels of government prior to the signature of the Minister for designation of the Plan under the *Oceans Act*. Similarly, the mechanisms contained in the Collaborative Planning Model for stakeholder input and review have been designed to ensure broad support for the Plan prior to its completion and implementation.

FEEDBACK

Will the approval and sign-on process presented here provide the necessary level of commitment and accountability to the Plan? For government? For ocean sectors?

ACTION PLANS

Implementation of the management objectives, strategies and actions contained in the Plan will be undertaken through the regular development and implementation of shorter term action plans (*i.e.*, two-three year cycles). The action planning process enables the identification and selection of actions that are deemed to be of a priority or short-term nature. Medium and longer term actions may also be included in action plans, particularly in cases where sequential activities or steps are required to achieve completion and/or implementation. This may include short-term steps and activities for long-term actions.

Action plans are designed to provide a high level of detail on the specific management actions selected for them, including various roles and responsibilities, timelines, milestones and targets, and specific activities required for successful completion.

The ESSIM Planning Office will provide a lead role in the development of the action plans, with direct input from government and sectors through the mechanisms contained in the Collaborative Planning Model. It is anticipated that the annual meetings of the full ESSIM Forum will be used to help develop action plans and report on their progress.

PERFORMANCE MONITORING AND REPORTING

Successful implementation of the Plan will require an effective and comprehensive program for performance monitoring and reporting. This is an integral component of the objectives-based approach, and key to the practice of adaptive management. There are two main, inter-related components of an effective performance monitoring and reporting program:

- **Plan outcomes:** A key aspect of the performance monitoring and reporting program is the assessment of outcomes resulting from the management objectives, strategies and actions contained in the Plan. This will be determined through the use of outcome indicators for the various ecosystem and human use objectives, as well as through the evaluation of results from the completion and implementation of the various strategies and actions. Regular state of the ecosystem reporting may be combined with related assessments of management actions to demonstrate performance and progress against objectives and desired outcomes.

- **Plan performance:** The second main component of the performance monitoring and reporting program is focused on the Plan itself, particularly in terms of the progress made in undertaking the various strategies, actions and commitments. This will include assessments of adherence to principles and objectives, as well as the effectiveness of the collaborative planning framework.

The selection of appropriate indicators to support the above monitoring requirements is discussed in the section, **OBJECTIVES-BASED MANAGEMENT FRAMEWORK**.

In tandem with performance monitoring, the Plan will require a practical and transparent reporting system to enable all participating departments and sector groups to demonstrate adherence to and implementation of the Plan. The various mechanisms identified for approving and adopting the Plan will also fulfill many of the reporting requirements for the Plan. The ESSIM Planning Office will draw information from these sources as it prepares regular performance reports for the Plan and its supporting action plans. Other means to assess performance and accountability may include interviews, audits or questionnaires.

PLAN REVISION

The Plan will undergo a full review every five years. This time period will facilitate the completion of two action planning cycles. It also corresponds to the short-to-medium-term timelines for the majority of management actions contained in the Plan. The five-year review will cover all aspects of the Plan and will draw on information and findings obtained through the performance monitoring and reporting process, as well as emerging management needs and priorities. The ESSIM Planning Office will provide a lead role in the plan review and revision process, with the support of all components of the Collaborative Planning Model.

FEEDBACK

Do you feel that the implementation and review process outlined here will provide a practical and effective framework for moving forward with the Plan? Are there other approaches that could be considered?

…a shared commitment to work together for our ocean and our future…

APPENDIX A: BACKGROUND INFORMATION AND KEY REFERENCES FOR THE ESSIM INITIATIVE

This appendix contains a list of key references and documents for the ESSIM Initiative. The documents listed below and additional background information can be obtained from the ESSIM Initiative website (**http://www.mar.dfo-mpo.gc.ca/oceans/e/essim/essim-intro-e.html**) or by contacting the ESSIM Planning Office.

ESSIM PLANNING OFFICE DOCUMENTS

The Development of a Collaborative Management and Planning Process: A Discussion Paper prepared for the Federal-Provincial ESSIM Working Group (2001).

Issues, Challenges and Opportunities: A Discussion Paper prepared for the Federal-Provincial ESSIM Working Group (2001).

An International Survey of Integrated Ocean and Coastal Planning Initiatives (2001).

A Strategic Planning Framework for the Eastern Scotian Shelf Ocean Management Plan: A Discussion Paper prepared for the ESSIM Forum (2003).

Oceans and Coastal Management Report 2004-01. *Developing Objectives and Indicators for Marine Ecosystem-Based Management: International Review of Marine Ecosystem-Based Management Initiatives throughout the World* (prepared by Jay Walmsley, Jacques Whitford Environment Ltd.).

Oceans and Coastal Management Report 2004-02. *Developing Objectives and Indicators for Marine Ecosystem-Based Management: Definition of Commonly Used Terms* (prepared by Jay Walmsley, Jacques Whitford Environment Ltd.).

Oceans and Coastal Management Report 2004-03. *International Review of Areas where Activities are Restricted to Protect Deep Sea Corals* (prepared by D'Entremont Environmental Ltd.).

Oceans and Coastal Management Report 2004-04. *Review of Criteria for Selecting Ecologically Significant Areas of the Scotian Shelf and Slope: A Discussion Paper* (prepared by Heather Breeze, Maris Consulting).

Oceans and Coastal Management Report 2004-05. *Eastern Scotian Shelf Integrated Management (ESSIM) Initiative: Proposed Collaborative Planning Model – A Discussion Paper* (prepared by Bruce Smith, BLSmith Groupwork Inc.).

Oceans and Coastal Management Report 2005-01. *Report of the Eastern Scotian Shelf Integrated Management Community Workshops.*

Oceans and Coastal Management Report 2005-03. *Human Use Objectives and Indicators Framework for Integrated Management on the Scotian Shelf* (prepared by Jay Walmsley, Jacques Whitford Environment Ltd.).

ESSIM-RELATED DFO DOCUMENTS

Below is a selection of ESSIM-related documents available through DFO's Canadian Science Advisory Secretariat (CSAS) and the Canadian Fisheries and Aquatic Sciences report series.

Proceedings Series

R. O'Boyle (ed.). 2000. *Proceedings of a Workshop on the Ecosystem Considerations for the Eastern Scotian Shelf Integrated Management (ESSIM) Area.* CSAS Proceedings Series 2000/014.

G. Jamieson and R. O'Boyle (eds.). 2001. *Proceedings of the National Workshop on Objectives and Indicators for Ecosystem-based Management.* CSAS Proceedings Series 2001/009.

J. Arbour (chair) and V. Kostylev (ed.). 2002. *Proceedings of a Benthic Habitat Classification Workshop Meeting of the Maritimes Regional Advisory Process. A Framework for the Conservation of Benthic Communities of the Scotia-Fundy Area of the Maritimes Region.* CSAS Proceedings Series 2002/023.

R. O'Boyle and P. Keizer. 2003. *Proceedings of three workshops to investigate the unpacking process in support of ecosystem-based management; February – July, 2002.* CSAS Proceedings Series 2003/004.

J. Arbour (chair) and R. St-Laurent (compiler). 2004. *Proceedings of a Benthic Habitat Classification Workshop Meeting of the Maritimes Regional Advisory Process. Benthic Classification and Usage Guidelines of the Scotia-Fundy Area of the Maritimes Region.* CSAS Proceedings Series 2004/004.

H. Powles, V. Vendette, R. Siron and R. O'Boyle. 2004. *Proceedings of the Canadian Marine Ecoregions Workshop.* CSAS Proceedings Series 2004/016.

Habitat and Ecosystem Status Reports

DFO Maritimes Region. 2003. *State of the Eastern Scotian Shelf Ecosystem.* CSAS Ecosystem Status Report 2003/04.

DFO National Capital Region. 2004. *Habitat Status Report on Ecosystem Objectives.* CSAS Habitat Status Report 2004/01.

Research Documents

S. Coffen-Smout, R.G. Halliday, G. Herbert, T. Potter, and N. Witherspoon. 2001. *Ocean Activities and Ecosystem Issues on the Eastern Scotian Shelf: An Assessment of Current Capabilities to Address Ecosystem Objectives.* CSAS Research Document 2001/095.

R. O'Boyle, M. Sinclair, P. Keizer, K. Lee, D. Ricard and P. Yeats. 2004. *Indicators for Ecosystem-Based Management on the Scotian Shelf: Bridging the gap between Theory and Practice.* CSAS Research Document (in press).

Technical and Manuscript Reports

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APPENDIX B: ESSIM COLLABORATIVE PLANNING MODEL – SELECTION CRITERIA AND PROCESS FOR THE STAKEHOLDER ROUNDTABLE

The selection criteria and process for membership in the ESSIM Stakeholder Roundtable is presented in this appendix. The text below has been drawn from the *Oceans and Coastal Management Report 2004-05, Eastern Scotian Shelf Integrated Management Initiative: Proposed Collaborative Planning Model – A Discussion Paper.*

SELECTION CRITERIA

The following criteria can serve as guidelines for sectors or others who are involved in nominating or selecting members/representatives for the Eastern Scotian Shelf Integrated Management (ESSIM) Stakeholder Roundtable (SRT). One or more criteria may be applicable, depending upon the specific situation.

Sector/interest: Diversity and balance among sectors and interests has been a foundation of the ESSIM process, and will remain so. Where possible, representation/membership will take into account shared interests, and coalitions may be encouraged.

Location: Diversity in geographic representation will be important, and representation will be sought from stakeholder groups and organizations with members/constituents in various parts of the province, region or beyond.

Degree of involvement: Preference will be given to those organizations whose members are most involved or most likely to be involved in activities within the planning area.

Representation: Member organizations will represent a number of individuals whose interests or views are similar. The size of a constituency or general membership of an organization may be a factor in selection.

Internal communication: A member organization's internal structures and processes should ensure that accurate and timely information flows from the SRT to the members/constituents of the participating organizations, and that representatives bring fully informed and supported views of their organizations' members. Mechanisms could include newsletters, internet/web sites, meetings, etc.

Commitment:* Willing and able to have a representative work cooperatively with others while taking part in meetings, and other SRT activities. Representatives must have time available for preparation, participation and liaison with constituents.

Respect:* Organizations and individuals invited for membership will have a general standing or level of recognition and acceptance in their respective communities and within the broader ESSIM community.

Capacity and knowledge:* Preference may be given to organizations or individuals that have a clear track record of respectful and productive multi-stakeholder process participation. The

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* These criteria should apply both to the organizations receiving the invitation and to the individuals who will sit at the table as their representatives.

ability to engage in dialogue will be an asset, as will knowledge of the planning area, process and issues.

Legal factors: The process should include those with legislative/regulatory involvement or mandates, and stakeholders who have valid contracts, licenses, or other rights relating to the use of the planning area.

History: Previous or ongoing engagement in ESSIM-related activities may be a factor in SRT membership selection.

These criteria should be clear, consistent, comprehensive, and rational. They will be used to explain to organizations why they are being invited, as well as to explain to some why they were not invited. Their statement and application will be a visible demonstration of the open and transparent nature of the ESSIM process.

SELECTION OF SRT MEMBERS

In multi-stakeholder consensus processes, there are three ways in which participants are nominated and/or selected for advisory groups or other structures for which membership is limited and representative. Those methods are as follows:

- identification and nomination/selection by the responsible government department or agency
- nomination/selection by sectors or stakeholder group coalitions or caucuses
- selection by a neutral third party

It is recommended that the membership for the SRT be determined through internal sector caucus and discussion. Each sector will be asked to meet as a caucus and discuss their representation on the SRT. The sector will jointly put forward the name(s) of the organization(s) or individual(s) who will represent the sector on the SRT. Sector caucuses may be assisted by neutral facilitators provided by the ESSIM Planning Office. Sector caucuses will be asked to consider and use the proposed selection criteria guidelines when choosing their representatives, and be prepared to provide a rationale for their decisions.